

Coryphaenoides bucephalus (Garman)

Macrurus bucephalus Garman, Mem. Mus. Comp. Zool., vol. 24, p. 195 (396), pl. 44, 1899 (type locality: lat. 23°16'N., long. 107°31'W., in 852 fathoms; lat. 1° to 7°N., long. 79° to 86°W., 134 to 1573 fathoms; Gulf of California to Colombia).

Macrurus (Macrurus) bucephalus Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 15, p. 390, 1906 (reference).

Macrourus bucephalus Jordan, Evermann, Clark, Rep. U. S. Comm. Fisher., pt. 2, p. 205, 1930 (reference).

Coryphaenoides bucephalus Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51, p. 143, 1916 (reference)

Coryphaenoides bulbiceps (Garman)

Macrurus bulbiceps (Garman, Mem. Mus. Comp. Zool., vol 24, p. 194, pl. 44, figs. 1 - 1b, 1899 (type locality: lat. 5°43'N., long. 85°50'; 978 fathoms, off Cocos Island).

Macrourus bulbiceps Jordan, Evermann, Clark, Rep. U. S. Comm. Fisher., pt. 2, p. 205, 1930 (reference).

Nematonurus bulbiceps Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51, p. 143, 1916 (reference).

Coryphaenoides burragei (Gilbert).

Macrourus burragei Gilbert, Bull. U. S. Fish Comm., vol. 23, pt. 2, p. 668, fig. 260, 1903 (1905) (type locality: off southern Oahu, 294 to 330 fathoms).

Macrurus (Macrurus) burragei Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 15, p. 389, 1906 (reference).

Lionurus burragei Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51, p. 146, 1916 (reference).

Coryphaenoides burragei Fowler, Mem. Bishop Mus., vol. 10, p. 86, 1928 (compiled).

Depth $5 \frac{4}{5}$; head $5 \frac{1}{2}$, width $1 \frac{2}{3}$. Snout $4 \frac{1}{4}$ in head; eye $3 \frac{1}{4}$, greatly exceeds snout or interorbital; preoral region short and nearly vertical, about equals eye; maxillary reaches $\frac{1}{4}$ in eye, length from front end 3 in head; mandibular barbel $1 \frac{1}{2}$ in eye; teeth in rather broad villiform bands in jaws, 9 or 10 in irregular transverse series; interorbital 4 in head, low, nearly level. Gill rakers 2+7, low spinous tubercles on second arch, $\frac{1}{2}$ of gill filaments, which $2 \frac{1}{3}$ in eye.

Scales 130 in lateral line to pseudocaudal; 14 above, 23 below, 40 predorsal of which 23 forward opposite hind eye edge. Scales with about 13 or 14 nearly parallel rows of rather long slender apical spinules, last well extended beyond hind scale edge; circuli moderate, obscure apically.

D. II, 10 — 114?, second ~~simple~~^{simple} ray slender, with row of small antrorse denticles along its front edge, length slightly greater than head or $4 \frac{7}{8}$ to pseudocaudal; interdorsal space $2 \frac{4}{5}$; A. 105, fig height $2 \frac{1}{3}$; pseudocaudal 2; pectoral rays I, 19, fin $1 \frac{2}{5}$ in head; ventral rays I, 8, fin $1 \frac{1}{4}$.

Largely uniform brown, more or less grayish anteriorly or on head. Branchiostegal region neutral dusky or gray. Iris pale. Fins pale.

Hawaiian Islands.

U. S. N. M., No. 51641.

off southern coast of Oahu. In 294 to 330 fathoms. Albatross Collection (3917). Length 270 mm.

Coryphaenoides camurus (Smith and Radcliffe)

Macrourus camurus Smith and Radcliffe, Proc. U. S. Nat. Mus.,

vol. 43, p. 122, pl. 27, fig. 2, 1912 (type locality: east Palawan, in 1105 fathoms).

Coryphaenoides camurus Gilbert and Hubbs, Proc. U. S. Nat.

Museum., No. 100, vol. 1, p. 421, 1920 (type).

Depth $5 \frac{3}{5}$; head 5, width 2. Snout to eye $3 \frac{1}{2}$ in head; eye $4 \frac{3}{5}$, $1 \frac{1}{4}$ in snout, $1 \frac{1}{5}$ in interorbital; orbit $3 \frac{1}{3}$ in head, $1 \frac{1}{8}$ times snout, $1 \frac{1}{8}$ times interorbital; maxillary reaches eye center, length from front end $2 \frac{1}{4}$ in head; mandibular barbel $3 \frac{1}{5}$; teeth in narrow villiform bands in jaws, 2 or 3 irregular transverse series; interorbital $3 \frac{1}{2}$ in head, low, level. Gill rakers 2+9 low tubercles on second arch, about $2 \frac{1}{2}$ in gill filaments, which $\frac{1}{2}$ of eye.

Scales (pockets) about 125? in lateral line; 15 above, 23? below, 22 forward on predorsal till opposite hind edge of orbit. Scales with 3 rows of rather large slender apical spines, last of which project beyond hind scale edge; circuli few, coarse, more or less complete.

D. II, 9 — 95?, second ~~simple~~^{simple} ray slender, with row of antrose spines along its front edge, length $1 \frac{4}{5}$? in head; A 115?, fin height 4?; pectoral rays I, 21, fin $1 \frac{4}{5}$? in head, ventral I, 8, fin 2, first simple ray ends in short filament.

Uniform brown. Sides of head, breast and belly blackish brown. Iris dark neutral gray. Inside mouth dark gray. Inside mouth dark gray. Inside gill opening blackish brown.

Fins all brown.

Philippines.

U. S. N. M., No. 73939. Fondeado Island (S.E.), N. 29E.,
23 miles (lat. 9°34'38"N., long. 118°45'E.), eastern Palawan
and vicinity. In 1105 fathoms. April 3, 1909.
Albatross Collection (5428). Length 98 mm. Type.

Coryphaenoides capito (Garman)

Macrurus capito Garman, Mem. Mus. Comp. Zool., vol. 24, p. 200

(396), 1899 (type locality : lat. 7°31'30"N., long. 79°14',

in 485 fathoms, Gulf of Panama; off Acapulco; 493 fathoms).

Macrurus (Macrurus) capito Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 388, 1906 (reference).

Macrourus capito Jordan, Evermann, Clark, Rep. U. S. Comm. F

Fisher., pt. 2, p. 205, 1930 (reference).

Coryphaenoides capito Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1916 (reference).

Coryphaenoides carapinus Goode and Bean

Coryphaenoides carapinus Goode and Bean, Bull. Mus. Comp. Zool., vol.

10, pp. 191, 198, 1883 (type locality: Lat. 39°38'20"N., long.

70°56'W., 1241 fathoms; lat. 38° to 39°N., long. 70° to 73°W., 722

to 1002 fathoms). — Miner, Rep. U. S. Fish Comm., pt. 11, p. 185,

1883 (1885) (lat. 39°29'N., long. 70°58'40"W., in 1342 fathoms;

lat. 39°22'20"N., long. 70°52'20"W., in 1451 fathoms);

Science, vol. 2, p. 617, November 9, 1883 (Albatross Stations 2095

2096).

— Parker, in Benedict, Rep. U. S. Fish Comm., pt. 12, p. 101,

1884 (1886) (lat. 39°46'30"N., long. 70°14'45"W., 1060 fathoms).

— Jordan, Rep. U. S. Fish Comm., pt. 13, p. 919, 1885 (1887)

(reference). — Günther, Rep. Voy. Challenger, vol. 22, p. 138, 1887

(note). — Goode and Bean, Oceanic Ichth., p. 404, fig. 339, 1895

(lat. 29° to 41°N., long. 65° to 73°W., 662 to 1451 fathoms). —

Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47, pt. 3, p. 2579,

1898 (copied). — Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51,

p. 143, 1916 (reference). — Jordan and Evermann, Clark, Rep. U. S.

Comm. Fisher., pt. 2, p. 205, 1930 (reference).

Depth $6 \frac{4}{5}$ to 7; head 6 to $6 \frac{1}{3}$, width 2 to $2 \frac{1}{5}$. Snout to eye 3 to $3 \frac{1}{3}$ in head; eye $4 \frac{7}{8}$ to $5 \frac{1}{4}$, $1 \frac{1}{2}$ to $1 \frac{3}{4}$ in snout, $1 \frac{7}{8}$ to 2 in interorbital; maxillary reaches $\frac{1}{2}$ to $\frac{4}{4}$ in eye, length from front end $2 \frac{3}{5}$ to $2 \frac{2}{3}$ in head; teeth in villiform band in upper jaw, 4 or 5 irregular rows transversely anteriorly, also single row of similar short teeth below; interorbital $2 \frac{1}{2}$ to $2 \frac{3}{4}$ in head, low, convex. Gill rakers 0 to 4 + 10 to 15 low spinescent tubercles on second arch, $\frac{1}{2}$ of gill filaments, which $2 \frac{1}{5}$ in eye.

Scales 175 in lateral line to pseudocaudal; 11 above, 22 below, 55 predorsal forward to snout end. Scales with 7 or 8 slightly convergent apical series of spinules, last extended beyond scale edge; circuli moderate, fine, complete.

D. II, 8 to II, 10—100, second ~~simple~~^{simple} ray slender, entire, $1 \frac{2}{5}$ to $1 \frac{9}{10}$ in head, interdorsal space $2 \frac{1}{5}$ to 3; A. 100 to 160, fin height $2 \frac{3}{4}$ to 3; pectoral rays I, 17, fin $1 \frac{2}{5}$ to $1 \frac{3}{5}$ in head; ventral fin I, 6, fin $2 \frac{1}{5}$.

Largely uniform brown. Some examples with head, also lower surfaces inclusive of breast and bell, silvery gray to dark neutral gray. Iris grayish. Inside mouth dusky to black. Inside gill opening blackish brown to black. Fins pale or brownish.

Western North Atlantic. Most of the specimens, especially the small ones, have lost their scales and many are in very poor preservation.

U. S. N. M., No. 23004. Trondhjem's Fjord, Norway. Prof.
Robert Collett. Christiana University. December 23, 1878.
Length 790 mm.

U. S. N. M., No. 33158.

Length 197 mm.

U. S. N. M., No. 33273. Lat. $39^{\circ}26'16''$ N., long. $70^{\circ}2'37''$ W. In
1362 fathoms. July 17, 1883. Albatross Collection (2035). Length
310 mm.

U. S. N. M., No. 33307. Lat. $39^{\circ}41'$ N., long. $69^{\circ}20'20''$ W. In
1106 fathoms. August 1, 1883. Albatross Collection (2051). Length
188 to 290 mm. 5 examples.

U. S. N. M., No. 33314. Lat. $39^{\circ}40'5''$ N., long. $69^{\circ}21'25''$ W. In
1098 fathoms. August 1, 1883. Albatross Collection (2052). Length
230 to 268 mm. 5 examples.

U. S. N. M., No. 33315. Lat. $39^{\circ}41'$ N., long. $69^{\circ}20'20''$ W. In
1106 fathoms. August 1, 1883. Albatross Collection (2051). Length
200 to 247 mm. 6 examples.

U. S. N. M., No. 33316. Lat. $39^{\circ}41'N.$, long. $69^{\circ}20'20''W.$ In 1106 fathoms. August 1, 1883. Albatross Collection (2051). Length 215 to 295 mm. 7 examples.

U. S. N. M., No. 33367. Lat. $41^{\circ}9'40''N.$, long. $66^{\circ}2'20''W.$ In 1255 fathoms. September 4, 1883. Albatross Collection (2077). Length 120 to 227 mm. 9 examples.

U. S. N. M., No. 33376. Lat. $41^{\circ}53'N.$, long. $65^{\circ}35'W.$ In 858 fathoms. September 2, 1883. Albatross Collection (2072). Length 115 to 175 mm. 2 examples.

U. S. N. M., No. 33395. Lat. $41^{\circ}43'N.$, long. $65^{\circ}21'50''W.$ In 1309 fathoms. September 3, 1883. Albatross Collection (2074). Length 215 mm.

U. S. N. M., No. 33437. Lat. $40^{\circ}16'50''N.$, long. $67^{\circ}5'15''W.$ In 1290 fathoms. September 5, 1883. Albatross Collection (2084). Length 310 mm.

U. S. N. M., No. 33518. Lat. $39^{\circ}39'45''N.$, long. $71^{\circ}35'15''W.$ In 538 fathoms. August 19, 1884. Albatross Collection (2201). Length 285 mm.

U. S. N. M., No. 33566. Lat. $39^{\circ}22'20''N.$, long. $70^{\circ}52'20''W.$ In 1451 fathoms. September 30, 1883. Albatross Collection (2096). Length 235 mm.

U. S. N. M., No. 33583. Lat. $39^{\circ}29'N.$, long. $70^{\circ}58'40''W.$ In 1342 fathoms. 1883. Albatross Collection (2095). Length 305 to 310 mm. 2 examples.

U. S. N. M., No. 35413. Lat. $39^{\circ}29'30''N.$, long. $71^{\circ}44'W.$ In 861 fathoms. July 23, 1884. Albatross Collection (2182). Length 145 mm.

U. S. N. M., No. 35470. Lat. $40^{\circ}00'45''N.$, long. $70^{\circ}54'15''W.$ In 129 fathoms. August 2, 1884. Albatross Collection (2185). Length 220 mm.

U. S. N. M., No. 35480. Lat. $39^{\circ}35'N.$, long. $69^{\circ}44'W.$ In 1230 fathoms. August 6, 1884. Albatross Collection (2196). Length 130 to 254 mm. 2 examples.

U. S. N. M., No. 35516. Lat. $39^{\circ}40'05''N.$, long. $69^{\circ}21'25''W.$ In 1098 fathoms. August 1, 1883. Albatross Collection (2052). Length 225? to 270 mm. 5 examples.

U. S. N. M., No. 35532. Lat. $39^{\circ}33'N.$, long. $71^{\circ}16'15''W.$ In 1778 fathoms. August 21, 1884. Albatross Collection (2208). Length 338 mm.

U. S. N. M., No. 38154. Lat. $36^{\circ}45'N.$, long. $74^{\circ}28'30''W.$ In 781 fathoms. October 25, 1886. Albatross Collection (2731). Length 205 mm.

U. S. N. M., No. 38158. No locality. October 25, 1886.

Albatross Collection. Length 238 to 257 mm. 2 examples.

U. S. N. M., No. 38165. Lat. $36^{\circ}35'N.$, long. $74^{\circ}3'30''W.$ In
1239 fathoms. October 24, 1886. Albatross Collection (2727). Length
190? to 310 mm. 4 examples.

U. S. N. M., No. 39241. Lat. $37^{\circ}46'30''N.$, long. $73^{\circ}56'30''W.$ In
865 fathoms. September 17, 1887. Albatross Collection (2742). Length
(140? or 170?) to 175 mm. 2 examples.

U. S. N. M., No. 39256. Lat. $37^{\circ}46'30''N.$, long. $73^{\circ}56'30''W.$ In
865 fathoms. September 17, 1887. Albatross Collection (2742). Length
70 to 120 mm. 5 examples.

U. S. N. M., No. 44619. Lat. $41^{\circ}3'30''N.$, long. $66^{\circ}14'W.$ In 662
fathoms. July 14, 1885. Albatross Collection (2529). Length 110 to
218 mm. 2 examples.

U. S. N. M., No. 45782. Lat. $39^{\circ}35'N.$, long. $71^{\circ}2'30''W.$
July 17, 1885. Albatross Collection (2685). Length 260 to 283
mm. 2 examples.

U. S. N. M., No. 45783. Lat. $40^{\circ}16'30''N.$, long. $67^{\circ}26'15''W.$
~~XXXXXXXXXX~~ July 15, 1885. Albatross Collection (2533).
Length 87 to 158 mm. 9 examples.

U. S. N. M., No. 45784. Lat. $39^{\circ}44'30''$ N., long. $70^{\circ}30'45''$ W.

August 9, 1885. Albatross Collection (2550). Length 119 to 235 mm. 15 examples.

U. S. N. M., No. 45785. Lat. $39^{\circ}15'30''$ N., long. $71^{\circ}25'$ W.

August 11, 1885. Albatross Collection (2562). Length 265 mm.

U. S. N. M., No. 45786. Lat. $38^{\circ}44'$ N., long. $72^{\circ}38'$ W.

November 5, 1883. Albatross Collection (2102). Length 115 to 255 mm. 6 examples.

U. S. N. M., No. 45787. Lat. $40^{\circ}16'30''$ N., long. $67^{\circ}26'15''$ W.

July 17, 1885. Albatross Collection (2533). Length 73 to 117 mm. 2 examples.

U. S. N. M., No. 45788. Lat. $40^{\circ}53'30''$ N., long. $66^{\circ}24'$ W.

July 14, 1885. Albatross Collection (2530). Length 148 mm.

U. S. N. M., No. 45789. Lat. $38^{\circ}47'20''$ N., long. $72^{\circ}37'$ W.

November 5, 1883. Albatross Collection (2103). Length 125 mm.

U. S. N. M., No. 45790. Lat. $35^{\circ}45'23''$ N., long. $74^{\circ}31'25''$ W.

November 11, 1883. Albatross Collection (2116). Length 102 to 175 mm. 8 examples.

U. S. N. M., No. 45791. Lat. $39^{\circ}22'$ N., long. $71^{\circ}23'30''$ W.

August 11, 1885. Albatross Collection (2564). Length 283 to 353 mm. 2 examples.

U. S. N. M., No. 45792. Lat. $39^{\circ}37'N.$, long. $71^{\circ}8'W.$

July 18, 1886. Albatross Collection (2691). Length 140 to 225 mm. 2 examples.

U. S. N. M., No. 45793. Lat. $35^{\circ}1'19''N.$, long. $75^{\circ}12'W.$

October 17, 1885. Albatross Collection (2593). Length 150 to 220 mm. 2 examples.

U. S. N. M., No. 45794. Lat. $41^{\circ}28'30''N.$, long. $65^{\circ}35'30''W.$

August 27, 1886. Albatross Collection (270_). Length. 173mm.

U. S. N. M., No. 45827. Lat. $40^{\circ}6'N.$, long. $68^{\circ}1'30''W.$

August 28, 1886. Albatross Collection (2710). Length 138 mm.

U. S. N. M., No. 45844. Lat. $32^{\circ}40'N.$, long. $76^{\circ}40'30''W.$

May 6, 1886. Albatross Collection (2678). Length 270 to 320 mm. 3 examples.

U. S. N. M., No. 74337. Lat. $40^{\circ}34'30''N.$, long. $66^{\circ}48'W.$

July 1885. Albatross Collection (2532). Length 158 mm.

Coryphaenoides carinatus Günther

Coryphaenoides carinatus Gunther, Ann. Mag. Nat. Hist., ser. 5,
vol. 2, p. 23, 1878 (type locality: deep sea near Prince Edward
Island, in 500 fathoms).

Macrurus carinatus Gunther, Rep. Voy. Challenger, vol. 22, p. 137,
pl. 33, fig. A, 1887 (type). — Goode and Bean,

Oceanic Ichth., p. 391, 1895 (reference). — Garman, Mem. Mus. Comp.
VOL 24, p. 396, 1899 (Reference).

Macrurus (Macrurus) carinatus Brauer, Deutsch. Tiefsee Exped. Valdivia,
vol. 57, p. 388, 1906 (reference).

Coryphaenoides Carminatus (Goode and Bean)

Macrurus carminatus Goode and Bean, Proc. U. S. Nat. Mus., vol. 3,
p. 346, 1880 (type locality: lat. 40°2'54"N., Long. 70°23'40", in
115 fathoms), p. 475.

Macrurus (Coelorhynchus) carminatus Brauer, Deutsch. Tiefsee Exped.
Valdivia, vol. 15, p. 388, 1906 (reference).

Coelorhynchus carminatus Goode and Bean, Oceanic Ichth., p. 398 pl.
fig. 336, 1895.

— Jordan and Evermann, Bull, U. S. Nat. Mus., No. 47, pt. 3,
p. 2588, 1898 (compiled). — Garman, Mem. Mus. Comp. Zool., vol 24,
p. 397, 1899 (reference). — Jordan Evermann, Clark, Rep. U. S. Comm.
Fisher., pt. 2, p. 207, 1930 (reference).

Coryphaenoides carminetus Gilbert and Hubbs, Proc.

U. S. Nat. Mus., vol. 51, p. 144, 1906 (reference).

Depth $6 \frac{3}{5}$ to $8 \frac{1}{2}$; head $4 \frac{2}{3}$ to 5, width $1 \frac{9}{10}$ to $2 \frac{1}{5}$. Snout to eye $2 \frac{1}{2}$ to $2 \frac{7}{8}$ in head; eye 4 to $4 \frac{1}{4}$, $1 \frac{1}{4}$ to $1 \frac{3}{4}$ in snout, 1 in interorbital; orbit 3 to $3 \frac{1}{4}$ in head, 1 to $1 \frac{1}{8}$ in snout, greatly exceeds interorbital; maxillary reaches $\frac{1}{2}$ in eye, length from front end $3 \frac{2}{3}$ to 4 in head; mandibular barbel $2 \frac{1}{2}$ to 3 in eye; teeth in villiform bands in jaws, 6 or 8 irregular transverse series; interorbital $4 \frac{1}{5}$ to $4 \frac{1}{2}$, low nearly level forward. Gill rakers 0 + 8, low spiniferous tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $\frac{1}{3}$ of eye.

Scales 118 in lateral line; 5 above, 10 below, 10 predorsal forward to occiput, which about first fourth between hind edge of orbit and first dorsal origin. Scales with 12 or 13 nearly parallel rows of rather long, slender spinules apically, with last extended but slightly behind scale edge; circuli fine, more or less obsolete apically.

D. II, 9—~~100~~, second ~~simple~~ ^{simple} ray pungent, slender, entire, $1 \frac{1}{2}$ to $1 \frac{3}{5}$ in head; interdorsal space $1 \frac{7}{8}$ to $2 \frac{3}{5}$; A. 100, fin height 4 to $4 \frac{2}{5}$; pectoral rays I, 15, fin $1 \frac{7}{8}$ in head, ventral rays I, 6, fin $1 \frac{7}{8}$ to $2 \frac{3}{4}$.

Largely uniform brown, under surface of head slightly paler. Iris pale to whitish. Inside mouth pale. Inside gill opening blackish, though edges of gill opening not dark. Fins brown, first dorsal with 2 dusky blotches, one subbasal and other near apex.

Western North Atlantic.

U. S. N. M., No. 26001. Lat. $40^{\circ}2'36''$ N., long. $70^{\circ}22'53''$ W. In 115 fathoms. September 4, 1880. U. S. Fish Comm. (870). Length 243 to 248 mm. 2 examples.

U. S. N. M., No. 26188. Off Newport, Rhode Island. In 238 fathoms. October 2, 1880. Fish Hawk Collection (895). Length 256 mm.

U. S. N. M., No. 26189. Off Newport, Rhode Island. In 372 fathoms. October 2, 1880. Fish Hawk Collection (893). Length 215 to 250 mm. 2 examples.

U. S. N. M., No. 26197. Off Newport, Rhode Island. In 238 fathoms. October 2, 1880. Fish Hawk Collection (895). Length 280 to 303 mm. 2 examples.

U. S. N. M., No. 26735. Lat. $37^{\circ}24'$ N., long. $74^{\circ}17'$ W. In 300 fathoms. November 16, 1880. Fish Hawk Collection (898). Length 70 to 170 mm. 13 examples.

U. S. N. M., No. 28753. Lat. $39^{\circ}53'$ N., long. $69^{\circ}50'30''$ W. In 258 fathoms. August 4, 1881. U. S. Fish Comm. (939). Length 119 to 185 mm. 3 examples.

U. S. N. M., No. 28891. Lat. $39^{\circ}50'30''$ N., long. $71^{\circ}23'$ W. September 8, 1881. U. S. Fish Comm. (1026). Length 189 to 260 mm. 4 examples.

U. S. N. M., No. 28958. Lat. $39^{\circ}56'$ N., long. $69^{\circ}22'$ W. Sept. 14, 1881. U.S. Fish Comm. (1032). Length 142 to 240 mm. 8 examples.

U. S. N. M., No. 29048. Lat. $38^{\circ}35'N.$, long. $73^{\circ}13'W.$ In 312 fathoms. October 10, 1881. Fish Hawk Collection (1045). Length 283 mm.

U. S. N. M., No. 29054. Lat. $38^{\circ}33'N.$, long. $73^{\circ}18'W.$ In 104 fathoms. October 10, 1881. Fish Hawk Collection (1046). Length 195 to 230 mm. 2 examples.

U. S. N. M., No. 31600. Lat. $39^{\circ}54'N.$, long. $69^{\circ}44'W.$

U. S. Fish Comm.

Length 165 mm.

U. S. N. M., No. 31775. Lat. $39^{\circ}39'N.$, long $71^{\circ}54'W.$ In 168 fathoms. September 8, 1892. U. S. Fish Comm. (1138). Length 179 mm.

U. S. N. M., No. 31868. Lat. $39^{\circ}58'N.$, long $70^{\circ}35'W.$ In 115 fathoms. October 4, 1882. U. S. Fish Comm. (1152). Length 203 mm.

U. S. N. M., No. 32807. Lat. $36^{\circ}41'5"N.$, long. $74^{\circ}38'55"W.$

May 1, 1883. Albatross Collection (2014). Length 260 mm.

U. S. N. M., No. 33512. Lat. $39^{\circ}58'35"N.$, long. $71^{\circ}00'30"W.$ In 197 fathoms. September 21, 1883. Albatross Collection (2092). Length 148 to 202 mm. 3 examples.

U. S. N. M., No. 33543. Lat. $39^{\circ}58'50"N.$, long. $70^{\circ}39'40"W.$ In 168 fathoms. September 20, 1883. Albatross Collection (2089). Length 144 to 168 mm. 3 examples.

U. S. N. M., No. 35476. Lat. $39^{\circ}57'45''\text{N.}$, long. $70^{\circ}56'30''\text{W.}$ In 195 fathoms. August 2, 1884. Albatross Collection (2183). Length 188 to 197 mm. 2 examples.

U. S. N. M., No. 35478. Lat. $39^{\circ}53'30''\text{N.}$, long. $69^{\circ}43'20''\text{W.}$ In 148 fathoms. August 6, 1884. Albatross Collection (2200). Length 302 mm.

U. S. N. M., No. 35686. Lat. $39^{\circ}54'45''\text{N.}$, long. $69^{\circ}29'45''\text{W.}$ In 250 fathoms. September 28, 1884. Albatross Collection (2262). Length 268 to 312 mm. 2 examples.

U. S. N. M., No. 43625. Lat. $28^{\circ}45'\text{N.}$, long. $86^{\circ}26'\text{W.}$ In fathoms. March 14, 1885. Albatross Collection (2398). Length 230 to 303 mm. 2 examples.

U. S. N. M., No. 45686. Lat. $39^{\circ}56'\text{N.}$, long. $70^{\circ}14'30''\text{W.}$
August 8, 1880. Albatross Collection (2548). Length 182 to 300 mm. 6 examples.

U. S. N. M., No. 45688. Lat. $28^{\circ}42'\text{N.}$, long. $86^{\circ}36'\text{W.}$
March 14, 1880. Albatross Collection (2397). Length 265 mm.

U. S. N. M., No. 45696. Lat. $36^{\circ}51'37''\text{N.}$, long. $74^{\circ}42'15''\text{W.}$
June 4, 1885. Albatross Collection (2424). Length 82 to 158 mm. 6 3xamples.

U. S. N. M., No. 45697. Lat. $39^{\circ}56'\text{N.}$, long. $70^{\circ}14'30''\text{W.}$
August 8, 1885. Albatross Collection (2548). Length 158 to 334 mm. 7 examples.

U. S. N. M., No. 45701. Lat. $36^{\circ}1'30''$ N., long $74^{\circ}47'30''$ W.

June 4, 1885. Albatross Collection (2426). Length 173 to
210 mm. 5 examples.

U. S. N. M., No. 74321. Lat. $39^{\circ}50'$ N., long $71^{\circ}43'$ W.

September 1885. Albatross Collection (2582). Length 86 to
190 mm. 2 examples.

Coryphaenoides carminifer (Garman)

Macrurus Carminifer Garman, Mem. Mus. Comp. Zool., vol. 24, p. 204

(397), pl. 46, fig. 2 (type locality: lat. 7°15'N., long. 79°36'W.,

1020 fathoms; Gulf of Panama; 322 to 730 fathoms).

Macrurus (Macrurus) carminifer Brauer, Deutsch. Tiefsee Expedition,

Valdivia, vol. 15, p. 389, 1906 (reference).

Macrourus carminifer Jordan, Evermann, Clark, Rep. U. S. Comm.

Fisher., pt. 2, p. 206, 1930 (reference).

Depth $5 \frac{4}{5}$; head 5, width $1 \frac{3}{4}$. Snout to eye 3 in head; eye $5 \frac{1}{4}$, $1 \frac{4}{5}$ in snout, $1 \frac{2}{5}$ in interorbital; orbit $3 \frac{4}{5}$ in head, $1 \frac{1}{8}$ in snout, 1 in interorbital; preoral profile little inclined from vertical, straight, length $6 \frac{3}{5}$ in head; maxillary reaches opposite front of eye, length from front end $3 \frac{1}{5}$ in head; mandibular barbel $\frac{1}{2}$ in orbit; teeth in fine villiform bands in jaws, 4 to 6 irregular rows transversely; interorbital $3 \frac{2}{5}$ in head, low, nearly level or slightly depressed. Gill rakers 1 + 8 low spinescent tubercles on second arch, $\frac{1}{2}$ of gill filaments, which $3 \frac{1}{2}$ in orbit.

Scales 125 in lateral line; 11 above, 19 below, 46 predorsal of which 25 forward until opposite hind orbital edge. Scales with 12 rows of parallel long apical spinules, last extended well behind scale edge; circuli moderate, complete.

D. II, 9—87, rays broken though second ~~simple~~ ^{simple} one with row of antrorse denticles along its front edge; interdorsal space 2 in head;

A. 83, fin height $5 \frac{1}{4}$; pectoral rays I, 20, fin (broken) $2 \frac{1}{5}$ in head; ventral rays I, 7, fin $1 \frac{4}{5}$.

Uniform dark or dusky brown. Iris pale gray. Inside mouth pale. Inside gill opening blackish brown. Under side of head, breast and bell not dark.

Gulf of Panama. An interesting species, quite uniform brown and without dark or black tints under head and trunk. Although Garman describes the denticles along the front edge of the second simple dorsal ray, they are not shown on his figure.

U. S. N. M., No. 57860. Lat. $7^{\circ}6'15''$ N., long. $80^{\circ}34'$ W.

In 695 fathoms.

Albatross Collection (3353). Length 287 to end of broken tail.

Coryphaenoides cinereus (Gilbert)

Macrurus cinereus Gilbert, Rep. U. S. Fish Comm., pt. 19, p. 457,

1893 (1895) (type locality: north of Unalaska, 399 to 1033 fathoms;
south of Oolsamok Island, 695 fathoms).

— Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47, vol. 3, p. 2586,

1898 (Bogoslof Island, 664 fathoms). — Garman, Mem. Mus. Comp.

Zool., vol. 24, p. 396, 1899 (reference). — Jordan and Gilbert,

Rep. Fur Seale Investig., vol. 3, p. , 1899 (off Bogoslof

Island). — Evermann and Goldsborough, Bull. Bur. Fisher., vol.

26, p. 350, 1906 (1907) (Bering Sea off Cape Etheridge, 600 fathoms).

— Gilbert and Burke, Bull. Bur. Fisher., vol. 30, p. 92, 1910 (1912)

(Bering Sea, 344 to 741 fathoms).

Macrurus (Macrurus) cinereus Brauer, Deutsch. Tiefsee Exped. Valdivia,

vol. 15, p. 389, 1906 (reference).

Macrourus cinereus Jordan, Evermann, Clark, Rep. U. S. Comm. Fisher.,

Pt. 2, p. 205, 1930 (reference).

Coryphaenoides cinereus Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. (144) 167, 1916 (off south-east Saghalin Island, 510 fathoms;

Chirikof Island and Shumagin Island, Alaska).

Depth 7 to $7 \frac{1}{5}$; head 5 to $5 \frac{2}{3}$, width 2 to $2 \frac{1}{10}$. Snout $3 \frac{2}{3}$ to $4 \frac{1}{4}$ in head; eye $4 \frac{1}{2}$, $1 \frac{2}{5}$ in snout, $1 \frac{1}{5}$ in inter-orbital; orbit $3 \frac{1}{3}$ to $3 \frac{2}{5}$ in head, snout $\frac{4}{5}$ to $\frac{7}{8}$ of orbit, orbit 1 to $1 \frac{1}{10}$ in interorbital; maxillary reaches $\frac{3}{4}$ to $\frac{4}{5}$ in orbit, length from front end $2 \frac{2}{5}$ to $2 \frac{3}{4}$ in head; mandibular barbel $3 \frac{1}{5}$ to $3 \frac{3}{4}$ in eye; teeth uniformly villiform; in bands in jaws of 4 or 5 irregularly transversely; interorbital $3 \frac{1}{5}$ to $3 \frac{2}{5}$ in head, low and cavernous. Gill rakers 3 + 12 low spinescent knobs on second arch, $\frac{1}{3}$ of gill filaments, which $\frac{1}{3}$ of eye.

Scales (pockets) 155? in lateral line; 10 above, 22? below 24 predorsal forward to hind eye edge. Scales with 7 slightly radiating series of spinules, last extended well beyond scale edge; circuli fine, complete.

D. II, 10 or II, 11—130?, second ~~simple~~^{simple} ray with row of small weak spinules along front edge, length $1 \frac{1}{8}$ to $1 \frac{5}{6}$ in head; interdorsal space $1 \frac{3}{4}$ to $2 \frac{2}{5}$ in orbit; A. 125?, fin height $4 \frac{2}{3}$ in head; pectoral rays I, 15, fin $1 \frac{1}{4}$ to 2 in head; ventral rays I, 8, fin $1 \frac{2}{3}$ to 2.

Largely uniform dark brown, side of head and trunk often silvered to whitish. Inside mouth and gill opening blackish. Iris gray. Fins brownish, often with more or less blackish brown.

North Pacific Ocean, Bering Sea.

U. S. N. M., No. 48577. Lat. 55°26'N., long. 155°26'W. In 695 fathoms. August 20, 1890. Albatross Collection (3340). Length 392 to 422 mm. Two examples, latter or larger evidently type of Macrurus cinereus.

U. S. N. M., No. 48628. Lat. 53°55'N., long 170°50'W. In 1033 fathoms. Albatross Collection (1063). Length 330 mm.

U. S. N. M., No. 48776. Lat. 54°11'30"N., long 167°25'W., Bering Sea. Albatross Collection (3607). August 18, 1895. Length 500 to 545 mm. 5 examples.

U. S. N. M., No. 53877.

Albatross Collection(3501). Length 323 to 380 mm. 2 examples, in poor preservation.

U. S. N. M., No. 60219.

Albatross Collection (3634). Length 198 to 514 mm. 4 examples

U. S. N. M., No. 60790.

July 3, 1903.

Albatross Collection (4267). Length 445? mm.

U. S. N. M., No. 70847.

In 344 fathoms.

Albatross Collection (4772). Length 96 to 395 mm. 5 examples.

U. S. N. M., No. 70849. Lat. 54°30'N., long. 179°17'E.,
 Bering Sea. In 426 fathoms. June 4, 1906. Albatross Collection
 (4771). Length 210 to 376 mm. 4 examples.

U. S. N. M., No. 70908.

In 682 fathoms. June 20, 1906. Albatross Collection
 (4797). Length 150 to 268 mm. 2 examples.

U. S. N. M., No. 70916.

Albatross Collection.
 (). Length 110 to 310 mm. 13 examples.

U. S. N. M., No. 70980. Lat. 54°12'N., long. 179°7'30"E.,
 Bering Sea. In 771 fathoms. June 3, 1906. Length 180 to 315 mm.
 4 examples.

U. S. N. M., No. 70981. Lat. 54°20'30"N., long. 179°9'30"E.,
 Bering Sea. In 764 fathoms. June 3, 1906. Albatross Collection
 (4768). Length 228 to 370 mm. 6 examples.

U. S. N. M., No. 77249.

Albatross Collection
 (5015). Length 386 mm.

U. S. N. M., No. 83868.

Albatross Collection
 (3307). Length 315? mm. In poor preservation.

Coryphaenoides clarki (Jordan and Gilbert)

Bogoslovius clarki Jordan and Gilbert, in Jordan and Evermann,

Bull. U. S. Nat. Mus., No. 47, pt. 3, p. 2575, 1898 (type

locality: off Bogoslof Island, Bering Sea, 664 fathoms).

— Evermann and Goldsborough, Bull. Bur. Fisher., vol 26, p. 349,

pl. 22, 1906 (1907) (name).

Nematonurus clarki Jordan and Gilbert, Rep. Fur Seale Investig.,

vol. 3. p. , 1899 (type). — Gilbert and Burke, Bull. Bur.

Fisher., vol 30, p. 93, 1910 (1912) (Bowers Bank in Bering Sea,

557 to 764 fathoms). — Gilbert and Hubbs, Proc. U. S. Nat.

Mus., vol. 51, p. 143, 1916 (reference).

Macrurus (Malacocephalus) clarki Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 391, 1906 (reference).

Depth $7 \frac{1}{3}$ to $9 \frac{1}{5}$; head $5 \frac{1}{4}$ to $5 \frac{3}{4}$, width $2 \frac{1}{8}$ to $2 \frac{1}{3}$. Snout to eye $3 \frac{4}{5}$ to $4 \frac{1}{5}$ in head; eye $5 \frac{1}{4}$ to $5 \frac{4}{5}$, $1 \frac{1}{4}$ to $1 \frac{2}{5}$ in snout, $1 \frac{1}{3}$ to $1 \frac{2}{5}$ in interorbital; orbit $4 \frac{1}{3}$ to $4 \frac{2}{3}$ in head, $1 \frac{1}{8}$ to $1 \frac{1}{5}$ in snout, $1 \frac{1}{8}$ to $1 \frac{1}{5}$ in interorbital; maxillary reaches $\frac{3}{4}$ to $\frac{4}{5}$ in eye, length from front end $2 \frac{1}{6}$ to $2 \frac{1}{5}$ in head; mandibular barbel $4 \frac{3}{4}$ to 5 in orbit; teeth biserial above with outer enlarged well spaced series and inner close set row, lower uniserial with well spaced larger teeth, between which one or several small teeth; interorbital $4 \frac{1}{8}$ to $4 \frac{1}{5}$ in head, low and like most of top of head cavernous. Gill rakers 3 + 13 low spinescent tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $\frac{1}{3}$ of orbit.

Scales (pockets) 180? in lateral line; 8 above, ? below, 25? predorsal forward opposite hind eye edge. Scales with 3 to 5 apical radiating spinuliferous ridges, last spines extending beyond scale edge; circuli moderate, complete.

D. II, 12 — 142?, second ~~simple~~ ^{simple} ray slender, its front edge with antrorse serrae, length $1 \frac{1}{3}$ in head; interdorsal space $2 \frac{1}{2}$ in orbit; A. 130?, fin height $5 \frac{3}{4}$? in head; ventral rays I, 9, fin $1 \frac{1}{5}$ times head.

Uniform brownish. Iris gray. Inside mouth and gill opening blackish brown. Fins all brownish.

Bering Sea.

U. S. N. M., No. 48778.

Albatross Collection

Length 405 to 437 mm. 2 examples, both poorly preserved.

U. S. N. M., No. 48799

Albatross Collection (3634).

Length 400 mm. Type of Bogoslovius clarki.

U. S. N. M., No. 70846

In 464 fathoms. June 3, 1906. Albatross Collection (4768).

Length 210 mm.

U. S. N. M., No. 70985.

In 557 fathoms. June 4, 1906. Albatross Collection (4774).

Length 223 mm.

U. S. N. M., No. 70986.

In 557 fathoms. June 4, 1906. Albatross Collection (4774).

Length 243 to 334 mm. 4 examples.

U. S. N. M., No. 70987.

Albatross Collection (4775).

Length 242 to 391 mm. 7 examples.

Coryphaenoides convergens (Garman)

Macrurus convergens Garman, Mem. Mus. Comp. Zool., vol 24,

p. 210 (397), pl. 48, fig. 1, 1899 (type locality: Lat.

7°6'15"N., long. 80°34'W., 695 fathoms; off Panama, 782 to

1020 fathoms.

Macrurus (Macrurus) convergens Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Macrourus convergens Jordan, Evermann, Clark, Rep. U. S. Comm.

Fisher., pt. 2, p. 206, 1930 (reference).

Lionurus convergens Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 146, 1916 (reference).

Coryphaenoides cuspidatus (Garman)

Macrurus cuspidatus Garman, Mem. Mus. Comp. Zool., vol. 24,

p. 209 (397), 1899 (type locality: lat. 27°34'N., long.

110°53'40"W., 905 fathoms, Gulf of California).

Macrurus (Macrurus) cuspidatus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Macrourus cuspidatus Jordan, Evermann, Clark, Rep. U. S. Comm.

Fisher., pt. 2, p. 206, 1930 (reference).

Lionurus cuspidatus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 146, 1916 (reference).

Coryphaenoides cyclolepis (Gilbert)

Nematonurus cyclolepis Gilbert, Rep. U. S. Fish Comm., pt. 19,

p. 458, 1893 (1895) (type locality : off Queen Charlotte Islands,

1588 fathoms). — Garman, Mem. Mus. Comp. Zool., vol. 24, p. 395,

1899 (reference). — Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1916 (reference).

Moseleya cyclolepis Jordan and Evermann, Bull. U. S. Nat. Mus.,

No. 47, pt. 3, p. 2570, 1898 (compiled).

Macrurus (Nematonurus) cyclolepis Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 391, 1906 (reference).

Dolloa cyclolepis Jordan, Evermann, Clark, Rep. U. S. Comm. Fisher.,

pt. 2, p. 203, 1930 (reference).

Depth 7; head $4 \frac{3}{4}$, width 2. Snout $3 \frac{3}{5}$ in head; orbit $4 \frac{1}{2}$, $1 \frac{1}{6}$ in snout, equals interorbital; maxillary reaches $\frac{3}{4}$ in eye, length from front end $3 \frac{2}{5}$ in head; preoral profile vertically oblique, length $5 \frac{1}{4}$; mandibular barbel $1 \frac{1}{2}$ in orbit; teeth simple, small, in narrow biserial band above, below uniserial and slightly smaller; interorbital $3 \frac{3}{5}$ in head, low, nearly level. Gill rakers $1 + 8$ short tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $2 \frac{1}{5}$ in orbit.

Scales (pockets) 95? in lateral line; 12? above, 12? below. Scales cycloid, with 12 to 14 circuli.

D. II, 8 80?, second ~~simple~~^{simple} ray with single sharp slender barb apically on front edge, turned little outward and backward; interdorsal space $3 \frac{1}{8}$ in head; A. 80?, height at least equals snout length; pectoral rays I, 17, length $2 \frac{4}{5}$? in head; ventral with long filament reaching at least $\frac{1}{5}$ of anal base.

Brown. Abdomen dusky. Head brown, gill opening and gill covers blackish. Fins light brown to whitish. Iris gray.

Queen Charlotte Islands.

U. S. N. M., No. 48585. Lat. $52^{\circ}39'30''$ N., long. $132^{\circ}38'$ W. In 1588 fathoms.

Albatross Collection (3342).

Length 128 mm.

Coryphaenoides darus (Gilbert and Hubbs)

Lionurus darus Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. (146) 197, pl. 10, fig. 1, 1916 (type locality:

Suruga Gulf, Hondo, 197 fathoms).

Coryphaenoides denticulatus (Richardson)

Macrourus vel Lepidorhynchus denticulatus Richardson, Voy. Erebus and Terror, Fishes, p. 53, 1844-48 (type locality : coasts of south Australia).

Macrourus denticulatus Richardson, Voy. Erebus and Terror, Fishes, pl. 32, figs. 1 to 3, 1844--48.

Macrurus denticulatus Günther, Rep. Voy. Challenger, vol. 22, p. 147, 1887 (off New Zealand, 275 fathoms; Kermadec Islands, 520 fathoms).

Macrurus (Chalinura) denticulatus Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 15, p. 390, 1906 (reference).

Coryphaenoides denticulatus Günther, Cat. Fishes Brit. Mus., vol. 4, p. 396, 1862 (type). — Hutton, Fishes of New Zealand, p. 49, 1872 (Cook's Straits; South Australia). — Günther, Rep. Voy. Challenger, vol. 1, pt. 5, p. 26, 1880 (Cook's Strait). —

Macleay, Proc. Linn. Soc. New South Wales, vol. 5, p. 122, 1881

(South Australia). — Garman, Mem. Mus. Comp. Zool., vol. 24, p.

395, 1899 (reference). — Zietz, Trans. Roy. Soc. South Australia,

vol. 33, p. 266, 1909 (). Gilbert

and Hubbs, Proc. U. S. Nat. Mus., vol. 51, p. 144, 1916 (reference).

Optonurus denticulatus Goode and Bean, Oceanic Ichth., p. 614, 1895

(reference). McCulloch, Rec. Austral. Mus., vol. 6, pt. 5, p.

346, 1907 (). Waite, Rec. Canterbury Mus.,

vol. 1, No. 1, p. 17, April 25, 1907 (reference); Rec. South

Austral. Mus., vol. 2, No. 1, p. 66, April 23, 1921 (compiled).

Lord, Proc. Roy Soc. Tasmania, p. 65, 1922 (1923). McCulloch,

Fishes, New South Wales, ed. 2, p. 33, pl. 11, fig. 1162, 1927.

Lepidorhynchus denticulatus McCulloch, Biol. Res. Endeavour, vol. 5,

pt. 4, p. 183, pl. 48, June 8, 1926. (south and south west from

Eucla; south east from Genoa Peak, Victoria; 100 to 220 fathoms):

Coryphaenoides dubius (Smith and Radcliffe)

Macrourus dubius Smith and Radcliffe, Proc. U. S. Nat. Mus., vol.

43, p. 117, pl. 25, fig. 3, 1912 (type locality : Iligan Bay,

Mindanao, 410 fathoms).

Coryphaenoides dubius Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 144, 1916 (reference); Bull. U. S. Nat. Mus., No.

100, vol. 1, p. 409, 1920 (type).

Depth $5 \frac{5}{6}$; head $4 \frac{1}{4}$, width 2. Snout to eye 3 in head; eye 8, $2 \frac{1}{2}$ in snout, $1 \frac{4}{5}$ in interorbital; orbit 5 in head, $1 \frac{1}{2}$ in snout, $1 \frac{1}{8}$ in interorbital; maxillary reaches $\frac{1}{2}$ in orbit, length from front end $2 \frac{7}{8}$ in head; mandibular barbel thick and fleshy basally, $1 \frac{1}{2}$ in orbit; teeth in villiform bands in jaws, of 5 or 6 irregular series transversely; interorbital 5 in head, low, slightly convex. Gill rakers 0 + 7 low spinescent tubercles on second arch, $\frac{1}{4}$ of gill filaments, which $\frac{1}{2}$ of orbit.

Scales 100 in lateral line to pseudocaudal; 8 above, 15 below, 16 or 17 forward to occiput. Scales apically with broad area of 35 to 40 rows of close set parallel apical spinules, last of which extended slightly beyond hind edge of scale; circuli fine, basal.

D. II, 9—73, second ~~simple~~^{simple} ray slender, with front edge finely denticulated, length $1 \frac{3}{5}$ in head; interdorsal space 7; A. 90, fin height $3 \frac{1}{2}$; pseudocaudal (broken) 6?, pectoral I, 20, fin $1 \frac{3}{4}$ in head; ventral I, 7, fin $1 \frac{2}{5}$.

Uniform brownish. Iris gray. Lips little paler than under surface of head. Inside gill opening dusky. Fins more or less blackish to blackish brown.

Philippines.

U. S. N. M., No. 72934. Camp Overton Light, S. 80°E., 15.3 miles (lat. 8°15'20"N., long 123°57'E.), northern Mindanao. In 410 fathoms. August 7, 1909. Albatross Collection (D. 5511). Length 425 mm. Type Macrourus dubius.

Coryphaenoides ectenes (Gilbert and Cramer)

Macrourus ectenes Gilbert and Cramer, Proc. U. S. Nat. Mus., vol.

19, p. 423, pl. 44, fig. 1, 1897 (type locality : off Hawaiian

Islands, 313 fathoms). Gilbert, Bull. U. S. Fish Comm., vol.

23, pt. 2, p. 667, 1903 (compiled).

Macrurus ectenes Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396,

1899 (reference).

Macrurus (Macrurus) ectenes Brauer, Deutsch. Tiefsee Exped Val-

divia, vol. 15, p. 389, 1906 (reference).

Lionurus ectenes Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51,

p. 146, 1916 (reference).

Coryphaenoides ectenes Fowler, Mem. Bishop Mus., vol. 10, p. 86,

1928 (compiled).

Depth $10 \frac{1}{5}$; head $7 \frac{1}{5}$, width $2 \frac{1}{10}$. Snout 4 in head, $1 \frac{3}{5}$ in eye; eye $2 \frac{1}{2}$ in head; maxillary reaches $\frac{2}{5}$ in eye, length from front end $2 \frac{3}{4}$ in head; preoral length $4 \frac{4}{5}$; mandibular barbel $\frac{1}{3}$ of eye; teeth minutely villiform, in bands in jaws, of 5 to 7 irregular transverse rows; interorbital 4 in head, $1 \frac{3}{4}$ in eye, low, nearly level. Gill rakers $1 + 7$ low tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $\frac{1}{3}$ of eye.

Scales (pockets) 250? in lateral line; 10 above, 20? below 18? , predorsal forward till opposite hind orbital edge. Scales with 3 slightly divergent rows of several long slender apical spines, last extended behind scale edge; circuli few, complete.

D. I, 10 — second fin indistinct or rudimentary, second ~~simple~~ ^{simple} ray pungent, with several antrorse wide set basal spines, length (broken) 2? in head; A. 135? (to end of broken tail), fin evidently low; pectoral rays I, 21, fin $1 \frac{1}{2}$? in head; ventral rays I, 8, fin 3?

Dark brown. Breast and abdomen black. Iris neutral black. Inside gill opening rather pale, also inside mouth. Fins brownish.

Hawaiian Islands. A small species, with very large eye and extremely long, slender, tapering tail.

U. S. N. M., No. 47718. Lat. $21^{\circ}15'N.$, long $157^{\circ}30'W.$

In 313 fathoms. December 6, 1891. Albatross

Station ~~collection~~ (D. 3473). Length 130 mm to end of broken tail. Type of *Macrourus ectenes*.

Coryphaenoides fernandezianus (Günther)

Macrurus fernandezianus Günther, Rep. Voy. Challenger, vol. 22,

p. 145, pl. 38, fig. 3, 1887 (type locality : south of Juan
Fernandez, 1375 fathoms).

Macrurus (Chalinura) fernandezianus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 390, 1906 (reference).

Chalinura fernandezianus Goode and Bean, Oceanic Ichth., p. 412,

1895 (reference).

Chalinura fernandeziana Garman, Mem. Mus. Comp. Zool., vol. 24,

p. 395, 1899 (reference).

Coryphaenoides fernandezianus Gilbert and Hubbs, Proc. U. S. Nat.

Mus., vol. 51, p. 143, 1916 (reference).

Coryphaenoides ferrieri (Regan)

Chalinura ferrieri Regan, Rep. Voy. Scotia, vol. 4, Zool., p. 318,

pl. 2, fig. 1, 1915 (type locality ; lat 71°22'S., long. 16°34'

W., off Coats Land, 1410 fathoms).

Coryphaenoides ferrieri Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1906 (reference).

Coryphaenoides filifer (Gilbert)

Chalinura filifera Gilbert, Rep. U. S. Fish Comm., pt. 19, p. 458,

1893 (1895) (type locality : off Queen Charlotte Island, 1588

fathoms). —Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47,

pt. 3, p. 2577, 1898 (copied). —Garman, Mem. Mus. Comp. Zool.,

vol. 24, p. 395, 1899 (reference). —Jordan, Evermann, Clark,

Rep. U. S. Comm. Fisher., pt. 2, p. 204, 1930 (reference).

Coryphaenoides filifer Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1916 (reference).

Depth $6 \frac{1}{2}$ (to end of broken tail); head $4 \frac{3}{4}$, width $2 \frac{1}{8}$. Snout to eye $3 \frac{3}{4}$ in head; eye $5 \frac{1}{8}$, $1 \frac{2}{5}$ in snout, $1 \frac{1}{5}$ in interorbital; orbit $3 \frac{4}{5}$ in head, subequal with snout or interorbital; preoral length short, $2 \frac{1}{3}$ in orbit; maxillary reaches $\frac{2}{3}$ in eye, length from front end $2 \frac{1}{2}$ in head; mandibular barbel $4 \frac{1}{2}$ in orbit; teeth in villiform bands in jaws, 4 or 5 irregular rows transversely; interorbital $4 \frac{1}{8}$ in head, low and nearly level. Gill rakers 2 + 10 short spinescent tubercles on second arch, $\frac{1}{2}$ of gill filaments, which $2 \frac{2}{3}$ in orbit.

Scales (pockets) 145 in lateral line to end of broken tail; 14 above, 23? below, 58? predorsal of which 30 forward till opposite hind pupil edge; Scales with 5 parallel apical spinuliferous keels, last spinules not extended beyond hind scale edge; circuli fine, complete.

D. II, 14—90 (to end of broken tail), second ~~simple~~ ^{simple} ray slender, front edge with row of close set antrorse denticles, length $1 \frac{2}{5}$ in head; interdorsal space $7 \frac{2}{5}$; A. 87 (to end of broken tail); pectoral rays I, 8, fin $1 \frac{3}{4}$.

Uniformly brown. Iris dark gray. Branchiostegal region, breast and belly more or less dark or blackish brown. Inside mouth dark-drab. Inside gill opening blackish brown. Fins more or less dark brown, especially paired ones.

Queen Charlotte Islands.

Known by its short mental barbel and very short preoral, the large mouth appearing more or less subterminal inferiorly, also short interdorsal space. It is a dark, obscurely colored species.

U. S. N. M., No. 48626. Lat. $52^{\circ}29'30''$ N., long. $132^{\circ}30'$ W.

Coryphaenoides firmisquamis (Gill and Townsend)

Macrurus firmisquamis Gill and Townsend, Proc. Biol. Soc. Washington, vol. 11, p. 234, 1897 (type locality : Bering Sea north west of Pribilof Islands).

Bogoslovius firmisquamis Jordan and Evermann, Bull. U. S. Nat.

Mus., No. 47, pt. 3, p. 2575, 1898 (copies). — Evermann and

Goldsborough, Bull. Bur. Fisher., vol. 26, p. 349, 1906 (1907)

(Bering Sea). — Jordan, Evermann, Clark, Rep. U. S. Comm. Fisher., pt. 2, p. 204, 1930 (compiled).

Nematonurus firmisquamis Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1916 (reference).

Depth $6 \frac{2}{5}$ to 7; head 5, width $1 \frac{3}{4}$. Snout to eye $3 \frac{1}{8}$ to $3 \frac{1}{6}$ in head; eye $5 \frac{1}{4}$ to $5 \frac{2}{5}$, $1 \frac{3}{4}$ to $1 \frac{4}{5}$ in snout, $1 \frac{1}{4}$ to $1 \frac{1}{3}$ in interorbital; orbit 3 to $4 \frac{1}{5}$ in head, $1 \frac{1}{8}$ to $1 \frac{1}{5}$ in snout, 1 in interorbital; maxillary reaches $\frac{3}{4}$ of eye to opposite hind edge of orbit, length from front end $2 \frac{2}{5}$ to $2 \frac{4}{5}$ in head, mandibular barbel $\frac{1}{2}$ of eye; teeth small, conic, pointed, in 2 or 3 rows above with outer slightly enlarged, lower biserial though with inner row slightly larger; interorbital $3 \frac{2}{3}$ to 4 in head, low, broadly concave medially. Gill rakers 2 + 10, low spinescent knobs, $\frac{1}{3}$ of gill filaments, which $\frac{1}{2}$ of orbit.

Scales 152 in lateral line to pseudocaudal; 10 or 11 above, 18 below, 60 predorsal of which 30 forward opposite hind eye edge. Scales with 3 to 8 radiating apical spinuliferous ridges, last spinules extended behind scale edge; circuli fine, complete.

D. II, 10—126, second ~~simple~~^{simple} ray slender, with row of small antrorse spines along its front edge, length $1 \frac{2}{5}$ to $1 \frac{3}{5}$ in head; interdorsal space $1 \frac{1}{2}$ to $1 \frac{2}{3}$ in orbit; A. 105, fin height $3 \frac{1}{5}$ to $4 \frac{1}{3}$ in head; pseudocaudal $\frac{1}{5}$ of eye; pectoral rays I, 19, fin $1 \frac{7}{8}$ to 2 in head; ventral rays I, 7, fin $1 \frac{2}{3}$ to $1 \frac{3}{4}$ in head, first simple ray ending in filament.

Uniformly brown. Eye little pale to gray. Inside gill opening blackish, inside mouth paler. Fins all more or less dusky.

Bering Sea.

U. S. N. M., No. 48772.

Albatross Collection (D.1310).

Length 778 mm. Type of Macrurus firmisquamis.

U. S. N. M., No. 57804.

Albatross Collection (D.3274).

Length 520 mm.

Coryphaenoides fragilis (Garman)

Macrurus fragilis Garman, Mem. Mus. Comp. Zool., vol. 24, p. 203

(396), pl. 46, fig. 1, 1899 (type locality : lat. 6°17'N., long.

82°5'W., in 1672 fathoms, off Mariato Point, Gulf of Panama;

south west of Malpelo Island, 1823 fathoms).

Macrurus (Macrurus) fragilis Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 390, 1906 (reference).

Macrourus fragilis Jordan, Evermann, Clark, Rep. U. S. Comm. Fisher.,

pt. 2, p. 206, 1930 (reference).

Lionurus fragilis Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 146, 1916 (reference).

U. S. N. M., No. 57857. Lat. 2°35'N., long. 83°53'W.

In 1823 fathoms.

Albatross Collection (D3374).

Length 167 mm. In very poor condition, characters not made out.

Coryphaenoides gibber (Gilbert and Cramer)

Macrourus gibber Gilbert and Cramer, Proc. U. S. Nat. Mus., vol.

19, p. 426, pl. 44, fig. 2, 1897 (off Hawaiian Islands, 351 to

375 fathoms). —Gilbert, Bull. U. S. Fish Comm., vol. 23, pt.

2, p. 668, 1903 (1905) (off Molokai; Kauai; Hawaii, Kaiwi Channel; Bird Island; 253 to 800 fathoms).

Macrurus gibber Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396,

1899 (reference).

Macrurus (Macrurus) gibber Brauer, Deutsch. Tiefsee Exped. Valdivia,

vol. 15, p. 389, 1906 (reference).

Lionurus gibber Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51,

p. 146, 1916 (reference).

Coryphaenoides gibber Fowler, Mem. Bishop Mus., vol. 10, p. 86,

1928 (Hawaiian Islands).

Depth $5 \frac{1}{2}$ to $5 \frac{2}{5}$; head 5 to $5 \frac{2}{5}$, width $1 \frac{4}{5}$ to 2. Snout $3 \frac{1}{3}$ to $3 \frac{2}{5}$ in head; eye $3 \frac{1}{4}$ to $3 \frac{1}{3}$, 1 in snout, 1 to $1 \frac{1}{10}$ in interorbital; maxillary reaches $\frac{1}{4}$ to $\frac{2}{5}$ in eye, length from front end $2 \frac{2}{5}$ to $2 \frac{4}{5}$ in head; mandibular barbel $1 \frac{1}{3}$ to $1 \frac{2}{5}$ in eye; teeth minute, villiform, in narrow bands in jaws of 4 to 6 irregular transverse series; interorbital $3 \frac{1}{2}$ to $3 \frac{3}{5}$ in head, low, nearly level. Gill rakers 1 + 13, low spinescent tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $2 \frac{1}{5}$ in eye.

Scales (pockets) 114 in lateral line to pseudocaudal; 14 above, 19 or 20 below, 36 predorsal forward to snout end of which 20 extend forward till opposite hind edge of orbit. Scales with 6 or 7 radiating rows of short broad based apical spines, last projecting slightly behind scale edge; circuli moderate, complete.

D. II, 10 or II, 11 — 85, second slender ray pungent, basally with row of antrorse serrae along front edge, terminally filamentous, length 5 in total fish; A. 91 to 98, fin height $3 \frac{1}{3}$ to $3 \frac{2}{5}$ in head; pectoral rays I, 19, fin $1 \frac{1}{4}$ to $1 \frac{2}{5}$ in head; ventral rays I, 11, fin 2 in head.

Brown. Head above pale, much lighter than body. Jaws, under surface of head, opercles, breast and belly dark gray to neutral black, same shade extended back far as depressed pectoral above front of anal fin. Iris grayish. Inside mouth gray. Inside gill opening blackish. Fins light brown.

Hawaiian Islands.

U. S. N. M., No. 47733. Lat. 21°8'N., long. 157°43'W.

December 6, 1889.

Albatross Collection (D. 3475). Length 180 to 183 mm. Type Macrourus
gibber larger specimen, other paratype.

U. S. N. M., No. 55242.

Albatross Collection.

Length 107 to 205 mm. 11 examples.

U. S. N. M., No. 52243.

Albatross Collection.

Length 72 to 233 mm. 12 examples.

U. S. N. M., No. 55261.

Albatross Collection.

Length 160 to 222 mm. 4 examples.

Coryphaenoides goodii (Günther)

Macrurus goodii Gunther, Rep. Voy. Challenger, vol. 22, p. 136,

1837 (on Macrurus asper Goode and Bean).

Hymenocephalus goodei Goode and Bean, Oceanic Ichth., p. 407, pl. ,

fig. 340, 1896 (lat. 39° to 41°N., long. 65° to 71°; off Havana;

154 to 1608 fathoms).

Nematonurus goodei Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47,

pt. 3, p. 2571, 1898 (copied). — Gilbert and Hubbs, Proc. U. S.

Nat. Mus., vol. 51, p. 143, 1917 (reference).

Macrurus asper (not Günther) Goode and Bean, Bull. Mus. Comp. Zool.,

vol. 10, p. 196, 1883 (type locality: lat. 41°24'25"N., long. 65°

35'30"W., 1242 fathoms). — Miner, Rep. U. S. Fish Comm., pt. 11,

p. 185, 1883 (1885) (lat. 38° to 39° N., long. 70° to 72°W., 1091

to 2102 fathoms); Science, vol. 2, p. 6170, Nov. 9, 1883 (Albatross

Stations D. 2095 and D. 2096). — Parker, in Benedict, Rep. U. S.

Fish Comm., pt. 12, p. 101, 1884 (1885) (lat. 39°N., long 70°W.,

1058 to 1122 fathoms). — Tanner, Rep. U. S. Fish Comm., pt. 14,

p. 632, 1886 (1889) (lat. 38° to 41°N., long. 65° to 70°W., 1188

to 1544 fathoms).

Depth 6 to $7 \frac{4}{5}$; head $5 \frac{1}{4}$ to $5 \frac{2}{3}$, width $1 \frac{3}{4}$ to $2 \frac{1}{8}$. Snout to eye $3 \frac{1}{4}$ to $4 \frac{1}{8}$ in head; eye 6 to $7 \frac{1}{4}$, 2 in snout, $1 \frac{3}{5}$ to $1 \frac{3}{4}$ in interorbital; orbit $4 \frac{1}{4}$ to $5 \frac{2}{5}$ in head, $1 \frac{1}{8}$ to $1 \frac{1}{4}$ in snout, maxillary reaches hind eye edge or hind orbital edge, length from front end $2 \frac{2}{3}$ to $2 \frac{4}{5}$ in head; mandibular barbel 1 to $1 \frac{1}{4}$ in eye; teeth simple, conic, rather small, similar, uniserial in jaws; interorbital $3 \frac{3}{4}$ to 4 in head, low, depressed forward. Gill rakers 1 + 10 short spinescent tubercles on first arch, $\frac{1}{3}$ of gill filaments, which $1 \frac{1}{8}$ in eye.

Scales 140 to 150 in lateral line; 8 above, 19 below, 50 predorsal. Scales with 8 or 9 low spinuliferous apical parallel keels, last spines not extended behind hind scale edge; circuli fine, extended apically.

D. II, 8 or II, 9—140 to 150, second ~~simple~~ ^{simple} ray pungent, with row of antrorse serrae along its front edge; interdorsal space $1 \frac{2}{5}$ to $2 \frac{1}{8}$ in head; A. 110 to 120, fin height $3 \frac{1}{4}$; pectoral rays I, 19 to I, 20, fin $1 \frac{1}{2}$ to $1 \frac{2}{3}$ in head; ventral rays I, 8, fin $1 \frac{7}{8}$ to $2 \frac{1}{8}$.

Uniform brown, edge of gill opening blackish brown. Iris brown. Inside mouth gray. Inside gill opening blackish brown. Fins all dark brown.

Western Atlantic.

U. S. N. M., No. 33274. Lat. $39^{\circ}26'16''$ N., long. $10^{\circ}2'37''$ W.

Albatross Collection (). Length 290 to 558 mm. 4 examples.

U. S. N. M., No. 33276. Lat. $39^{\circ}26'$ N., long $70^{\circ}2'$ W.

Albatross Collec-
tion (). Length 330 to 435 mm. 10 examples.

U. S. N. M., No. 33277. Lat. $38^{\circ}53'$ N., Long. $69^{\circ}23'30''$ W.

Albatross Collection
(). Length 320 to 583 mm. 3 examples.

U. S. N. M., No. 33278. Lat. $38^{\circ}52'$ N., long. $69^{\circ}24'$ W.

Albatross Collection
(). Length 395 to 458 mm. 4 examples.

U. S. N. M., No. 33339. Lat. $39^{\circ}70'$ N., long $69^{\circ}21'$ W.

Albatross Collection
(). Length 265? to 485 mm. 5 examples.

U. S. N. M., No. 33455. Lat. $41^{\circ}9'$ N., long. $66^{\circ}2'$ W.

Albatross Collection
(). Length 305 to 390 mm. 2 examples.

U. S. N. M., No. 38137. Lat. $36^{\circ}47'$ N., long. $73^{\circ}9'$ W. In
1685 fathoms. October 23, 1882. Albatross Collection (2723). Length
250 mm.

U U. S. N. M., No. 38164. Lat. $36^{\circ}34'N.$, long. $73^{\circ}48'W.$ In
1374 fathoms. October 24, 1886. Albatross Collection (2725).
Length 250 mm.

U. S. N. M., No. 44256. Lat. $40^{\circ}1'N.$, long. $67^{\circ}29'W.$

Albatross Collection

(). Length 348 to 408 mm. 2 3xamples.

U. S. N. M., No. 44259. Lat. $39^{\circ}22'N.$, long. $71^{\circ}23'W.$

Albatross Collection

(). Length 473 mm.

U. S. N. M., No. 44260. Lat. $39^{\circ}22'N.$, long. $71^{\circ}22'W.$

Albatross Collection

(). Length 465 mm. Teeth largely uniserial and alike
in jaws.

U. S. N. M., No. 44261. Lat. $39^{\circ}22'N.$, long. $71^{\circ}23'W.$

Albatross Collection

(). Length 393 mm.

U. S. N. M., No. 45957

Length 222 to 298 mm. 3 examples.

U. S. N. M., No. 45958.

Length 305 to 310 mm. 2 examples.

U. S. N. M., No. 83877.

Albatross Collection

(2572). Length 224 to 354 mm. 4 examples.

U. S. N. M., No., 83967.

Albatross Collection

(). Length 200 to 270 mm. 4 examples.

U. S. N. M., No. 84522.

Albatross Collection

(2568). Length 270 to 310 mm. 3 examples.

Coryphaenoides guentheri (Vaillant)

Macrurus guentheri Vaillant, Expéd. Sci. Travailleur et Talisman,

Poiss., p. 386, 1888 (on materials listed below).

Macrurus guntheri Collett, Rés. Camp. Sci. Monaco, vol. 10, p. 80,

pl. 3, fig. 10, 1896 (north of Graciosa, Azores, 1850 meters).

—Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396, 1899 (references).

—Murray and Hjort, Depths of the Ocean, p. 397, 1912 (Faroe Shet-

land Channel). —Roule, Rés. Camp. Sci. Monaco, vol. 52, p. 79,

1919 (west of Sao Miguel and Terceira; 1482 to 1919 meters).

Macrurus (Macrurus) guntheri Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Coryphaenoides guentheri Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 144, 1916 (reference).

Macrurus sclerorhynchus (not Valenciennes) Günther, Rep. Voy.

Challenger, vol. 22, p. 133, pl. 32, fig. A, 1887 (90 miles

south east Cape St. Vincent, Canaries, 1090 fathoms).

Macrurus holotrachys (not Günther) Vaillant, Expéd. Sci.

Travailleur et Talisman, Poiss., p. 241, pl. 22, fig. 3, 1888

(type locality : coasts of Morocco, 2115 to 2200 meters).

Coryphaenoides habetatus (Gilbert)

Macrourus habetatus Gilbert, Bull. U. S. Fish Comm., vol. 23, pt. 2, p. 671, fig. 262, 1903 (1905) (type locality : off southern Oahu, 299 to 323 fathoms).

Macrurus (Macrurus) habetatus Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 15, p. 389, 1906 (reference).

Lionurus habetatus Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51, p. 146, 1916 (reference).

Coryphaenoides habetatus Fowler, Mem. Bishop Mus., vol. 10, p. 86, 1928 (compiled).

Depth $5 \frac{7}{8}$; head $4 \frac{3}{4}$, width 2. Snout $4 \frac{1}{3}$ in head; eye 3, greatly exceeds snout or interorbital; preoral profile vertical, length $1 \frac{1}{4}$ in eye; maxillary reaches $\frac{1}{3}$ in eye, length from front end $2 \frac{7}{8}$ in head; mandibular barbel not now made out (mandible damaged), said $\frac{1}{4}$ of orbit; teeth in villiform bands in jaws, 6 transversely above with outer row slightly enlarged, 4 or 4 transversely below though all finely and uniformly villiform; interorbital $3 \frac{2}{3}$ in head, low, concave. Gill rakers 2 + 9 short spinescent tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $\frac{1}{3}$ of eye.

Scales 116 in lateral line to end of broken tail; 11 above, 19 below, 24 predorsal forward to front of snout, of which 18 forward till opposite hind eye edge. Scales with 3 diverging wide set rows of spinules, last of which extend behind hind scale edge; circuli large, complete.

D. II, 12—100, second ~~simple~~^{simple} ray with row of antrorse, denticles along front edge, length $1 \frac{1}{4}$ in head; interdorsal space $2 \frac{4}{5}$; A. 114, fin height 3; pectoral rays I, 7, fin long as head with first ray extended in long filament.

Uniform brown. Under surface of head, mandible, breast and belly blackish brown. Iris dark or neutral black. Inside mouth pale, also inside gill opening. About 10 rather irregular dark or dusky transverse streaks or bars, posterior more distinct, variously complete. Fins brownish, anal dusky marginally.

Hawaiian Islands. A small species, known chiefly by its coloration with dark cross bars on the tail.

U. S. N. M., No. 51608.

In 209 to 323

fathoms.

Albatross Collection (2925). Length 122 mm.

Coryphaenoides hextii (Alcock)

Macrurus hextii Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 2,
p. 299, 1890 (type locality : lat. 11°12'47"N., long. 74°
25'30"W., off Elicapeni Bank, Laccadive Sea, 1000 fathoms);
ser. 6, vol. 10, p. 351, 1892 (Station 122, 865 to 880 fath-
oms); Illustrat. Zool. Investigator, pt. 2, pl. 12, fig. 3,
1894; Journ. Asiatic Soc. Bengal, vol. 63, pt. 2, p. 126,
1894 (reference). — Goode and Bean, Oceanic Ichth., p. 390,
1895 (reference). — Garman, Mem. Mus. Comp. Zool., vol. 24,
p. 396, 1899 (reference).

Macrurus (Macrurus) hextii Alcock, Cat. Deep Sea Fishes Indian Mus.,
p. 113, 1899 (Andaman Sea, 360 to 1000 fathoms).

Macrurus (Macrurus) hextii Brauer, Deutsch. Tiefsee Exped. Valdivia,
vol. 15, p. 389, 1906 (reference).

Coryphaenoides hextii Gilbert and Hubbs, Proc. U. S. Nat. Mus.,
vol. 51, p. 144, 1916 (reference).

Coryphaenoides heyningeni (Weber)

Macrurus heyningeni Weber, Siboga Exped., vol. 57, p. 156, pl.

5, fig. 3, 1913 (type locality : lat. $10^{\circ}48'6S.$, long. $123^{\circ}23'1E.$,

Timor Sea, 918 meters).

Coryphaenoides heyningeni Weber and Beaufort, Fishes Indo. Austral.

Archip., vol. 5, p. 34, fig. 7, 1929 (type).

Coryphaenoides hirundo (Collett)

Macrurus hirundo Collett, Rés. Camp. Sci. Monaco, vol. 10, p. 72,
 pl. 2, figs. 8—8b, 1896 (type locality : between Pico and São
 Jorge, Azores, 1266 meters). —Garman, Mem. Mus. Comp. Zool.,
 vol. 24, p. 396, 1899 (reference). —Roule, Rés. Camp. Sci. Monaco,
 vol. 52, p. 80, 1910 (south of Pico; south east of Flores; near
 Maio; 55 miles north west of Fayal; 1300 to 1900 meters).

Macrurus (Macrurus) hirundo Brauer, Deutsch. Tiefsee Exped. Valdivia,
 vol. 15, p. 389, 1906 (reference).

Lionurus hirundo Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51,
 p. 146, 1916 (reference).

Coryphaenoides holocentrus (Gilbert and Cramer)

Macrourus holocentrus Gilbert and Cramer, Proc. U. S. Nat. Mus.,

vol. 19, p. 425, pl. 43, 1897 (type locality : Hawaiian Islands,

351 to 375 fathoms). — Gilbert, Bull U. S. Fish Comm., vol. 23,

pt. 2, p. 668, 1903 (1905) (off southern Oahu, 308 to 322 fathoms).

Macrurus holocentrus Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396,

1899 (reference).

Macrurus (Macrurus) holocentrus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Lionurus holocentrus Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 146, 1916 (reference).

Coryphaenoides holocentrus Fowler, Mem. Bishop Mus., vol. 10, p. 86,

1928 (compiled).

Depth $5 \frac{1}{5}$ to $5 \frac{1}{4}$; head $3 \frac{1}{2}$ to $4 \frac{1}{8}$, width $1 \frac{7}{8}$ to 2. Snout $3 \frac{1}{2}$ to $3 \frac{2}{3}$ in head; eye $3 \frac{1}{2}$ to $3 \frac{2}{3}$, equals snout, greater than interorbital; maxillary reaches $\frac{1}{3}$ in eye, length from front end 3 to $3 \frac{1}{8}$ in head; mandibular barbel $2 \frac{1}{4}$ to 3 in eye; teeth in villiform bands in jaws, in 4 or 5 irregular transverse rows; interorbital $4 \frac{1}{5}$ to $5 \frac{1}{2}$ in head, low, nearly level. Gill rakers 0 + 9, low spinescent tubercles on second arch, $\frac{1}{4}$ of gill filaments, which $\frac{1}{2}$ of eye.

Scales 80 (pockets) in lateral line to pseudocaudal; 11 above, 16? below, 35 predorsal forward to snout end of which 20 forward to hind eye edge. Scales with 10 or 11 parallel apical rows of spinules, last extending but slightly behind hind scale edge; circuli moderate, complete.

D. II, 11 or II, 10—68, second ~~simple~~ ^{simple} ray slender, with row of antrorse spinules along front edge, length $1 \frac{1}{5}$ to $1 \frac{1}{3}$ in head; interdorsal space $2 \frac{1}{4}$ to $2 \frac{1}{3}$; A. 75, fin nearly equals orbit; pectoral rays I, 20, fin $1 \frac{3}{4}$ to $1 \frac{4}{5}$ in head; ventral rays I, 7, fin $1 \frac{2}{5}$.

Brown, more or less uniform. Iris grayish. Inside mouth pale. Branchiostegal region rather dark, though inside gill opening pale. Chest and belly dark neutral gray. Fins pale or light brownish.

Hawaiian Islands.

U. S. N. M., No. 47723.

In 375 fathoms.

Albatross Collection (3474). Length 160 mm. Paratype of Macrourus
Holocentrus.

U. S. N. M., No. 47734.

In 351 fathoms.

Albatross Collection (3475). Length 168mm. Type of Macrourus
holocentrus.

Coryphaenoides holotrachys (Günther)

Macrurus holotrachys Günther, Ann. Mag. Nat. Hist., ser. 5,

vol. 2, p. 24, 1878 (type locality : deep sea east of mouth
of Rio de la Plata, 600 fathoms); Rep. Voy. Challenger, vol.

22, p. 136, pl. 28, fig. B, 1887 (type). — Vaillant, Exped.

Sci. Travailleur et Talisman, Poiss., p. 241, pl. 22, fig. 3,

1888 (coasts of Morocco, 2115 to 2200 meters). — Collett, Rés.

Camp. Sci. Monaco, vol. 10, p. 83, pl. 2, figs. 6-6b, 1896

(off Newfoundland, 1267 meters). — Goode and Bean, Oceanic

Ichth., p. 396, 1896 (compiled). — Garman, Mem. Mus. Comp.

Zool., vol. 24, p. 396, 1899 (reference).

Macrourus holotrachys Jordan and Evermann, Bull. U. S. Nat. Mus.,

No. 47, pt. 3, p. 2582, 1898 (copied).

Macrurus (Macrurus) holotrachys Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Coryphaenoides holotrachys Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 144, 1916 (reference).

Coryphaenoides hoskynii (Alcock).

Macrurus hoskynii Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 6,
p. 214, Sep. 1890 (type locality : off Madras coast, lat. 18°26'
N., long. 85°24'E., 1310 fathoms); Journ. Asiatic Soc. Bengal,
vol. 43, pt. 2, p. 126, 1894 ();
Illustrat. Zool. Investigator, pt. 2, pl. 9, fig. 4, 1894. —
Goode and Bean, Oceanic Ichth., p. 390, 1895 (reference). —
Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396, 1899 (reference).

Macrurus (Macrurus) hoskynii Alcock, Cat. Deep Sea Fishes Indian Mus., p. 116, 1899 (Bengal Bay, 1310 fathoms).

Macrurus (Macrurus) hoskyni Brauer, Deutsch. Tiefsee Exped. Valdivia,
vol. 15, p. 389, 1906 (reference).

Coryphaenoides hoskynii Gilbert and Hubbs, Proc. U. S. Nat. Mus.,
vol. 51, p. 144, 1916 (reference); Bull. U. S. Nat. Mus., No. 100,
vol. 1, p. 410, 1920 (reference).

Coryphaenoides hyostomus (Smith and Radcliffe)

Macrourus hyostomus Smith and Radcliffe, Proc. U. S. Nat. Mus.,

vol. 43, p. 121, pl. 27, fig. 1, 1912 (type locality : Lagonoy Gulf, Luzon, 560 Fathoms).

Coryphaenoides hyostomus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 144, 1916 (reference); Bull. U. S. Nat. Mus., No.

100, vol. 1, p. 422, 1930 (type; off Luzon; near Sibuko Bay,

Borneo; Buton Straits near Celebes; 365 to 560 fathoms). —

Weber and Beaufort, Fishes Indo Austral. Archip., vol. 5, p. 33,

1929 (compiled).

Depth $7 \frac{1}{5}$ to end of broken tail; head $4 \frac{2}{3}$, width $1 \frac{4}{5}$. Snout to eye $3 \frac{1}{8}$ in head; eye 5, $1 \frac{2}{5}$ in snout, $1 \frac{1}{2}$ in interorbital; orbit $4 \frac{1}{2}$ in head, $1 \frac{1}{3}$ in snout, $1 \frac{1}{10}$ in interorbital; maxillary reaches $\frac{1}{3}$ in eye, length from front end $3 \frac{1}{8}$ in head; mandibular barbel $\frac{1}{3}$ of orbit; teeth in villiform bands in jaws, of 5 or 6 irregular transverse series; interorbital $4 \frac{2}{5}$ in head, level. Gill rakers 1 + 5 low spinescent tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $1 \frac{1}{2}$ in orbit.

Scales 97 (to end of broken tail) in lateral line; 5 above, 15 below, 34 predorsal of which 14 extend forward to occiput. Scales with 17 or 18 apical parallel series of slender denticles, last extending well beyond scale edge; circuli fine, complete.

D. II, 9—90, second ~~simple~~^{simple} ray with few low denticles along its front edge, long and filamentous, length $2 \frac{2}{3}$ in combined head and body; interdorsal space long as eye; A. 101, fin height $3 \frac{1}{5}$ in head; pectoral rays I, 17, fin 2 in head; ventral rays I, 7, fin 2.

Uniform brown. Lower surface of head paler than upper.

Branchiostegal region dusky to blackish brown. Iris gray. Inside mouth and gill opening blackish brown. Fins dark or blackish brown.

East Indies, Philippines.

U. S. N. M., No. 72938. Atulayan Island (E.), S. 63°W., 4 miles (lat. 13°37'30"N., long. 123°41'09"E.), east coast Luzon. In 560 fathoms. June 18, 1909. Albatross Collection (D.5470). Length 278 mm to end of broken caudal. Type of Macrourus hyostomus.

Coryphaenoides ingolfi (Lütken)

Macrurus ingolfi Lutken, Dan. Ingolf Exped., Fishes, p. 27, 1898

(type locality : south of Iceland).

Macrurus (Macrurus) ingolfi Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Macrourus ingolfi Jordan, Evermann, Clark, Rep. U. S. Comm. Fisher.,

pt. 2, p. 206, 1930 (reference).

Hymenocephalus ingolfi Garman, Mem. Mus. Comp. Zool., vol. 24,

p. 395, 1899 (reference).

Coryphaenoides ingolfi Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 144, 1916 (reference).

Coryphaenoides investigatoris (Alcock)

Macrurus investigatoris Alcock, Ann. Mag. Nat. Hist., ser. 6, vol.

4, p. 391, November 1889 (type locality: Andaman Sea all along

Andaman Chain, 265 to 490 fathoms; Bengal Bay, 193 to 405

fathoms); ser. 6, vol. 8, p. 121, 1891 (Station 115, 188 to

220 fathoms; Station 120, 240 to 276 fathoms); ser. 6, vol. 10,

p. 351, 1892 (Station 131, 410 fathoms); Illustrat. Zool. Invest-

gator, pt. 1, pl. 3, fig. 4, 1892; Journ. Asiatic Soc. Bengal,

vol. 63, pt. 2, p. 126, 1894 (). —Goode and Bean, Oceanic

Ichth., p. 390, 1895 (reference). —Garman, Mem. Mus. Comp. Zool.,

vol. 24, p. 396, 1899 (reference).

Macrurus (Macrurus) investigatoris Alcock, Cat. Deep Sea Fishes

Indian Mus., p. 109, 1899 (Bengal Bay; Andaman Sea; 193 to 490

fathoms). —Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 15,

p. 260, (388), 1906 (west coast of Sumatra, 750 meters; north east

coast of Africa, 628 to 823 meters).

Lionurus investigatoris Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 56, p. 146, 1916 (reference).

Depth 5; head 4, width 2. Snout to eye $3 \frac{1}{8}$ in head; eye $5 \frac{1}{2}$, $1 \frac{1}{2}$ in snout, 1 in interorbital; orbit $3 \frac{1}{2}$ in head, 1 in snout; preoral length $4 \frac{2}{3}$ in head; maxillary reaches $\frac{1}{4}$ in orbit, length from front end $3 \frac{4}{5}$ in head; mandibular barbel $2 \frac{1}{2}$ in eye; teeth minutely villiform, in rather narrow bands of jaws in 4 or 5 irregular series transversely; interorbital $4 \frac{1}{2}$ in head, low, slightly concave. Gill rakers $2 + 9$ low spiniferous tubercles on second arch, $\frac{1}{4}$ of gill filaments, which $1 \frac{1}{2}$ in orbit.

Scales 84 in lateral line to pseudocaudal; 7 above, 14 below, 36 predorsal well forward on snout of which 18 forward till opposite hind eye edge. Scales with 7 to 10 parallel apical spinuliferous keels, spinules minute and last slightly project beyond scale edge; circuli moderate, complete.

D. II, 10—82, second ~~simple~~ ^{simple} ray pungent, with row of antrorse serrae along front edge, length $1 \frac{1}{2}$ in head; interdorsal space $2 \frac{1}{5}$; A. 84, fin height $4 \frac{1}{2}$?; pectoral I, 18, fin $1 \frac{9}{10}$ in head; ventral I, 8, fin $1 \frac{3}{5}$.

Largely uniform umber or dull brown. Iris grayish. Inside mouth pale. Mandible below and branchiostegal region dark neutral gray to blackish. Chest, breast and belly neutral gray. Inside gill opening blackish brown, paler below.

Bay of Bengal, Andaman Sea, Eastern Indian Ocean.

U. S. N. M., No. 44420. Bengal Bay. Investigator Collection.
Length 170 mm.

Coryphaenoides latinasutus (Garman)

Macrurus latinasutus Garman, Mem. Mus. Comp. Zool., vol. 24,

p. 214 (397), 1899 (type locality : lat. 23°59'N., long.

108°40'W., Gulf of California, 995 fathoms).

Macrurus (Macrurus) latinasutus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Macrourus latinasutus Jordan, Evermann, Clark, Rep. U. S. Comm.

Fisher., pt. 2, p. 206, 1930 (reference).

Coryphaenoides latinasutus Gilbert and Hubbs, Proc. U. S. Nat.

Mus., vol. 51, p. 144, 1916 (reference).

Coryphaenoides latirostratus (Garman)

Macrurus latirostratus Garman, Mem. Mus. Comp. Zool., vol. 24,

p. 211, pl. 48, fig. 2, 1899 (type locality : lat. 7°21'N.,

long. 79°35'W., 511 fathoms; off western Colombia, 322 to

458 fathoms).

Macrourus latirostratus Jordan, Evermann, Clark, Rep. U. S. Comm.

Fisher., pt. 2, p. 206, 1930 (reference).

Lionurus latirostratus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 146, 1916 (reference).

Depth $6 \frac{1}{5}$ to $6 \frac{3}{5}$; head $4 \frac{7}{8}$ to 5, width $1 \frac{7}{8}$ to $2 \frac{1}{4}$.
Snout $3 \frac{1}{2}$ to $3 \frac{7}{8}$ in head; eye 3 to $3 \frac{1}{5}$, $1 \frac{1}{5}$ to $1 \frac{1}{4}$
times snout, $1 \frac{1}{2}$ to $1 \frac{3}{5}$ times interorbital; preoral length $3 \frac{7}{8}$ to $4 \frac{1}{4}$ in head; maxillary reaches $\frac{1}{3}$ to $\frac{1}{2}$ in length,
length from front end $2 \frac{4}{5}$ to $3 \frac{1}{3}$ in head; mandible barble $3 \frac{1}{2}$ to $3 \frac{4}{5}$ in eye; teeth in villiform bands in jaws, 4 or 5
irregularly transversely, with outer upper row slightly enlarged;
interorbital $4 \frac{1}{8}$ to 5 in head, low, slightly depressed. Gill
rakers 0 + 7 low spinescent tubercles on second arch, $\frac{1}{4}$ of
gill filaments, which 2 in eye.

Scales (pockets) 92 to 100 in lateral line; 8 above, 14 below, 38 predorsal of which 17 forward opposite hind eye edge.

Scales all very caducous, most all fallen; with 13 or 14 irregular somewhat parallel rows of spinules apically, last not extended beyond scale edge; circuli fine, more or less complete.

D. II, 10—100 to 130, second ^{simple}~~simple~~ ray slender, front edge with row of small antrorse denticles, length $1\frac{1}{4}$ to $1\frac{7}{8}$ in head; interdorsal space 2 to $2\frac{3}{5}$; A. 98 to 102, fin height $3\frac{3}{4}$?; pectoral rays I, 20, fin $1\frac{4}{5}$ to 2 in head; ventral I, 10, fin 2 to $2\frac{1}{8}$, first ray ending in filament.

Dark brown, becoming neutral gray to black on under surface of head, breast and belly, also opercle and branchiostegal region. Iris dark gray. Inside mouth brown. Inside gill opening blackish brown. Fins all brownish.

Gulf of Panama.

U. S. N. M., No. 57855. Lat. $7^{\circ}21'N.$, long. $79^{\circ}35'W.$

In 511 fathoms.

Albatross Collection (D.3394). Length 206 to 211 mm. 2 examples.

U. S. N. M., No. ~~XXXXX~~ 91578.

March 2, 1888.

Albatross Collection (D.2792). Length 156 to 198 mm. 11 examples.

Coryphaenoides lepturus Gill and Townsend

Macrurus lepturus Gill and Townsend, Proc. Biol. Soc. Washington,

vol. 11, p. 233, 1897 (type locality : Bering Sea south west of

Pribilof Islands, 1401 fathoms). — Garman, Mem. Mus. Comp.

Zool., vol. 24, p. 396, 1899 (reference).

Macrurus (Macrurus) lepturus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1915 (reference).

Macrourus lepturus Jordan and Evermann, Bull. U. S. Nat. Mus., No.

47, pt. 3, p. 2584, 1898 (copied). — Gilbert and Burke, Bull.

Bur. Fisher., vol. 30, p. 91, fig. 35, 1910 (1912) (off Yunaska

Island, Aleutians, 1130 to 1217 fathoms). — Jordan, Evermann,

Clark, Rep. U. S. Comm. Fisher., pt. 2, p. 207, 1928 (1930)

(compiled).

Coryphaenoides lepturus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 144, 1916 (reference).

Macrurus dorsalis Gill and Townsend, Proc. Biol. Soc. Washington,

vol. 11, p. 233, 1897 (type Locality: Bering Sea south west of

Pribilof Islands.

Depth 7 to 8; head $5 \frac{1}{2}$ to $5 \frac{3}{5}$, width $2 \frac{1}{8}$ to $2 \frac{2}{3}$.
 Snout to eye $3 \frac{1}{2}$ to $3 \frac{4}{5}$ in head; eye $5 \frac{1}{5}$ to $5 \frac{1}{2}$, $1 \frac{2}{5}$ to $1 \frac{1}{2}$ in snout, $1 \frac{2}{5}$ to $1 \frac{1}{2}$ in interorbital; orbit $3 \frac{7}{8}$ to $4 \frac{1}{4}$ in head, 1 in snout, $1 \frac{1}{10}$ to $1 \frac{1}{5}$ in interorbital; maxillary reaches $\frac{3}{4}$ in orbit or to hind orbital edge, length from front end $2 \frac{2}{5}$ to $2 \frac{3}{4}$ in head; mandibular barbel $1 \frac{1}{4}$ to $2 \frac{3}{5}$ in eye; teeth in rather coarse villiform bands, in 6 to 8 irregular transverse rows; interorbital $3 \frac{2}{3}$ to $3 \frac{3}{4}$ in head, low, very slightly convex. Gill rakers 2 + 11 low spinose tubercles on second gill arch, $\frac{1}{4}$ of gill filaments which $\frac{1}{2}$ of orbit.

Scales 146 to end of broken tail; 10 above, 18 below, 60 predorsal of which 27 forward opposite hind eye edge. Scales with 4 to 10 nearly parallel apical spinuliferous ridges, last spinules not extended beyond hind edge of scale; circuli moderately fine, complete.

D. II, 120 or II, 13—120 to 122, second ^{simple}~~simple~~ ray slender, pungent, front edge with series of antrorse serrae, length $1 \frac{1}{10}$ in head; interdorsal space 5 to $5 \frac{1}{3}$; A. 115 to 122, fin height $4 \frac{1}{5}$ to $4 \frac{4}{5}$; pectoral rays I, 20, fin $1 \frac{1}{2}$ in head; ventral I, 7 or I, 8, fin $1 \frac{1}{8}$ in head to $1 \frac{1}{5}$ times head, first siniple ray terminally filamentous.

Largely uniformly dark brown, where scales have fallen pockets all dark or dusky brown. Iris grayish. Gill opening edged blackish brown, also blackish inside. Inside mouth brown. Fins all darker, dusky or blackish.

North Pacific, Bering Sea.

U. S. N. M., No. 3405.

Albatross Collection (D. 4765). Length 525 mm. In very poor condition.

U. S. N. M., No. 48767. Lat. $54^{\circ}54'N.$, long. $168^{\circ}59'W.$ In 1401 fathoms. August 12, 1895. Albatross Collection (D.3604). Length 545 mm. Type of Macrurus lepturus.

U. S. N. M., No. 48768. Lat. $54^{\circ}54'N.$, long. $168^{\circ}59'W.$ In 1401 fathoms. August 12, 1895. Albatross Collection (D.3604). Length 630 mm to end of broken tail. Type of Macrurus dorsalis.

Coryphaenoides leptolepis Günther

Coryphaenoides leptolepis Günther, Ann. Mag. Nat. Hist., ser. 4,

vol. 20, p. 441, 1877 (type locality : coasts of Brazil [not

Japan and mid Pacific])). Gilbert and Hubbs, Proc. U. S.

Nat. Mus., vol. 51, p. 143, 1916 (reference).

Macrurus leptolepis Günther, Rep. Voy. Challenger, vol. 22, p.

144, 1887 (off Pernambuco, 350 fathoms).

Macrurus (Chalinura) leptolepis Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 390, 1906 (reference).

Chalinura leptolepis Goode and Bean, Oceanic Ichth., p. 414, 1895

(copied). Garman, Mem. Mus. Comp. Zool., vol. 24, p. 395,

1899 (reference).

Brazil. Very close to

Coryphaenoides simulus (Goode and Bean) and though Günther gives

"D. 19" his figure shows D. II, 8. It also shows a much longer

ventral filament.

Coryphaenoides leucophaeus (Garman)

Macrurus leucophaeus Garman, Mem. Mus. Comp. Zool., vol. 24, p.

201 (396), 1899 (type locality : lat. 7°9'45"N., long. 80°

50'W., Gulf of Panama, 322 fathoms).

Macrurus (Macrurus) leucophaeus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 388, 1906 (reference).

Macrourus leucophaeus Jordan, Evermann, Clark, Rep. U. S. Comm.

Fisher., pt. 2, p. 205, 1930 (reference).

Coryphaenoides leucophaeus Gilbert and Hubbs, Proc. U. S. Nat.,

Mus., vol. 51, p. 144, 1916 (reference).

Coryphaenoides liocephalus (Günther)

Macrurus liocephalus Günther, Rep. Voy. Challenger, vol. 22, p.

145, pl. 38, fig. A., 1887 (type locality : near Yokoham, Japan,

1875 fathoms; Mid Pacific, 2050 fathoms).

Macrurus (Chalinura) liocephalus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 390, 1906 (reference).

Chalinura liocephala Goode and Bean, Oceanic Ichth., p. 412, 1895

(reference). — Garman, Mem. Mus. Comp. Zool., vol. 24, p. 395,

1899 (reference). — Jordan and Snyder, Annot. Zool. Japan.,

vol. 3, p. 119, 1901 (reference). — Jordan, Tanaka, Snyder, Journ.

College Sci. Tokyo, vol. 33, p. 415, 1913 (reference).

Coryphaenoides liocephalus Gilbert and Hubbs, Proc. U. S. Nat.

Mus., vol. 51, p. 143, 1916 (reference).

Coryphaenoides leptolepis (part) Günther, Ann. Mag. Nat. Hist., ser.

4, vol. 20, p. 441, 1877 (Japan; mid Pacific [not from coasts of

Brazil]).

Coryphaenoides liraticeps (Garman)

Macrurus liraticeps Garman, Mem. Mus. Comp. Zool., vol. 24, p.

196 (396), pl. 45, figs. 1-lb, 1899 (type locality : lat. 0°

4'N., long. 90°24'30"W., off James Island, Galapagos, 885

fathoms).

Macrurus (Macrurus) liraticeps Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Coryphaenoides liraticeps Gilbert and Hubbs, Proc. U. S. Nat.

Mus., vol. 51, p. 144, 1916 (reference).

Coryphaenoides longicirrhus (Gilbert)

Macrourus longicirrhus Gilbert, Bull. U. S. Fish Comm., vol. 23,

pt. 2, p. 672, fig. 263, 1903 (1905) (type locality : off

Kauai Island, 1000 to 1314 fathoms).

Macrurus (Macrurus) longicirrhus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Coryphaenoides longicirrhus Gilbert and Hubbs, Proc. U. S. Nat.

Mus., vol. 10, p. 86, 1928 (reference). — Fowler, Mem. Bishop

Mus., vol. 10, p. 86, 1928 (compiled).

Depth $5 \frac{1}{4}$; head $4 \frac{1}{2}$, width $1 \frac{4}{5}$. Snout $3 \frac{1}{2}$ in head; eye $5 \frac{2}{5}$, $1 \frac{1}{2}$ in snout, $1 \frac{3}{4}$ in interorbital; maxillary reaches $\frac{1}{2}$ in eye, length from front end $2 \frac{3}{4}$ in head; mandibular barbel $1 \frac{1}{8}$ in eye; teeth in jaws in 5 or 6 irregular rows, outer upper row enlarged, long and well spaced; interorbital $3 \frac{3}{4}$, broadly convex. Gill rakers 2 + 6, low spinescent tubercles on second arch, $2 \frac{1}{2}$ in gill filaments, which $1 \frac{3}{4}$ in eye.

Scales 126 in lateral line; 8 above, 16 below, 50 predorsal of which 25 forward till opposite hind eye edge. Scales with 16 to 18 parallel apical spinulose ridges, last spinules not extended beyond hind scale edge; circuli fine, complete.

D. II, 10—97, second ^{simple}~~simple~~ ray slender, its front edge minutely spinescent, length $1 \frac{1}{8}$ in head; interdorsal space $3 \frac{1}{3}$; A. 98, fin height $4 \frac{1}{3}$?; pectoral rays I, 20, fin $1 \frac{7}{8}$ in head; ventral rays I, 10, fin $1 \frac{1}{8}$ times head, first branched ray $2 \frac{2}{3}$ in filament.

Dark blackish brown, where scales have fallen scale edges all darker to blackish. Iris dark or dusky. Mouth brown inside, lips scarcely lighter than surrounding lower surface of head. Inside gill opening gray or livid gray blue to dusky. Fins more or less dark, first dorsal and paired fins nearly blackish.

Hawaiian Islands.

U. S. N. M., No. 51592.

Albatross Collection (D.2763).

Length 590 mm. Type of Macrourus longicirrhus.

Coryphaenoides longifilis Günther

Coryphaenoides longifilis Günther, Ann. Mag. Nat. Hist., ser. 4,

vol. 20, p. 439, 1877 (type locality : south of Yeddo, 565 fathoms).

Macrurus longifilis Günther, Rep. Voy. Challenger, vol. 22, p.

151, pl. 35, 1887 (type). — Goode and Bean, Oceanic Ichth.,

p. 417, pl. , fig. 347, 1895 (copied).

Moseleya longifilis Jordan and Snyder, Annot. Zool. Japan., vol.

3, p. 119, 1901 (reference).

Dollosa longifilis Jordan, Tanaka, Snyder, Journ. College Sci.,

Tokyo, vol. 33, p. 411, 1913 (compiled).

Nematonurus longifilis Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1916 (reference).

Coryphaenoides loricatus (Garman)

Macrurus loricatus Garman, Mem. Mus. Comp. Zool., vol. 24, p. 208

(397), pl. 47, figs. 2-2b, 1899 (type locality : lat. $0^{\circ}18'40''$

N., long. $90^{\circ}34'W.$, 327 fathoms; off Galapagos, 331 fathoms).

Macrurus (Macrurus) loricatus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 388, 1906 (reference).

Lionurus loricatus Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 146, 1916 (reference).

Depth $6 \frac{1}{4}$; head 5, width $1 \frac{4}{5}$. Snout $3 \frac{1}{3}$ in head; eye $3 \frac{1}{3}$, equals snout, $1 \frac{1}{4}$ times interorbital; preoral profile slightly concave, oblique, length $3 \frac{1}{2}$ in head; maxillary reaches $\frac{1}{2}$ in eye, length from front end $3 \frac{1}{8}$ in head; mandibular barbel $\frac{1}{2}$ of orbit; teeth in villiform bands in jaws, 4 or 5 irregular rows; interorbital 4 in head, low, nearly level. Gill rakers 1 + 7, low spinescent tubercles on second arch, $\frac{1}{4}$ of gill filaments which $2 \frac{1}{2}$ in orbit.

Scales 132 in lateral line; 10 above, 17 below, 36 predorsal of which 22 forward opposite hind orbital edge. Scales with irregular parallel rows of spinules, last not extended beyond scale edge; circuli moderate, complete.

D. II, 10—110, second ^{simple}~~simple~~ ray slender, with row of
antrorse denticles along front edge (ends of rays broken);
interdorsal space 2 in head; A. 118, fin height $4 \frac{1}{4}$; pectoral
rays I, 15, fin $1 \frac{3}{4}$ in head; ventral rays I, 9, fin $2 \frac{3}{5}$.

Uniform dark brown largely. Iris dark slate, under surface
of head and branchiostegal region neutral black, also chest,
breast and belly. Inside gill opening blackish or dark brown
above, whitish or pale below. Fins brownish.

Galapagos Islands.

U. S. N. M., No. 57859. Lat. $0^{\circ}19'N.$, long. $90^{\circ}3'41''W.$

In 331 fathoms.

Albatross Collection (D.3410). Length 241 mm.

Coryphaenoides macrolophus (Alcock)

Macrurus macrolophus Alcock, Ann. Mag. Nat. Hist., ser. 6 vol.

4, p. 394, November 1889 (type locality : Andaman Sea south
east by south of Ross Island, 265 fathoms); ser. 6, vol. 8,
p. 121, Aug. 1891 (Station 120, 240 to 276 fathoms); ser. 6,
vol. 10, p. 351, fig., Nov. 1892 (station 131, 410 fathoms);
Journ. Asiatic Soc, Bengal, vol. 63, pt. 2, p. 126, 1894 (
); Illustrat. Zool. Investigator, pt. 2, pl. 12, fig 1,

1894.

Macrurus (Macrurus) macrolophus Alcock, Cat. Deep Sea Fishes In-

dian Mus., p. 115, 1899 (Bengal Bay; Andaman Sea; Arabian Sea;
240 to 410 fathoms). — Brauer, Deutsch. Tiefsee Exped. Valdiv-
via, vol. 15, p. 266 (389), 1906 (off East Africa, 628 to 1362
meters).

Coryphaenoides macrolophus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 57, p. 144, 1916 (reference); Bull. U. S. Nat. Mus., No. 100,
vol. 1, p. 417, 1920 (compiled).

Macrurus lophotes Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 4,
p. 393, 1889 (type locality : Bay of Bengal, the "Swatch", 285
to 405 fathoms); Journ. Asiatic Soc. Bengal, vol. 43, pt. 2, p.
126, 1894 (); Illustrat. Zool. Investigator, vol. 1,
pl. 3, fig. 2, 1894. — Goode and Bean, Oceanic Ichth., p. 390,
1895 (copied). — Garman, Mem. Mus. Comp. Zool., vol 24, p. 396,
1899 (reference).

Macrurus (Macrurus) lophotes Alcock, Cat. Deep Sea Fishes Indian
Museum, p. 116, 1899 (Bengal Bay, 285 to 405 fathoms).

Coryphaenoides marginatus Steindachner and Döderlein

Coryphaenoides marginatus Steindachner and Döderlein, Denks.

Akad. Wiss. Wien, Math.-naturw. Kl., vol. 53, p. 284, 1887

(type locality : Tokyo). — Jordan and Snyder, Annot. Zool.

Japan., vol. 3, p. 120, 1901 (reference). — Jordan, Tanaka,

Snyder, Journ. College Sci., Tokyo, vol. 33, p. 415, 1913

(compiled). — Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. (143) 164, 1917 (Eastern Sea; Suruga Gulf; 148 to 440

fathoms).

Macrurus marginatus Döderlein, in Stein dachner and Döderlein,

Denks. Akad. Wiss. Wien, Math.-nat. Kl., vol. 53, p. 284, 1887

(name in synonymy).

Depth 6 to $6 \frac{3}{4}$; head $4 \frac{7}{8}$ to $5 \frac{1}{4}$, width $1 \frac{7}{8}$ to $2 \frac{1}{6}$.
Snout to eye 3 to $3 \frac{1}{8}$ in head; eye $4 \frac{1}{4}$, $1 \frac{1}{4}$ to $1 \frac{1}{4}$ in
snout, 1 to $1 \frac{1}{8}$ times interorbital; orbit $3 \frac{1}{2}$ to $3 \frac{3}{5}$ in head,
1 to $1 \frac{1}{8}$ in snout, $1 \frac{1}{5}$ to $1 \frac{1}{4}$ times interorbital; maxillary
reaches $\frac{1}{4}$ to $\frac{1}{4}$ in eye, length from front end $3 \frac{3}{4}$ to $3 \frac{7}{8}$ in
head; preoral ^{length} ~~length~~ $1 \frac{2}{3}$ to $1 \frac{3}{4}$ in orbit; mandibular barbel 2
to $2 \frac{1}{4}$ in eye; teeth finely villiform, in 4 or 5 irregular series
transversely; interorbital $4 \frac{1}{5}$ to $4 \frac{1}{2}$ in head, low and nearly level
forward. Gill rakers 1 + 8 low spinescent tubercles on second arch,

$1/3$ of gill filaments, which $1/2$ of eye.

Scales (pockets) 93 in lateral line to pseudocaudal; 8 or 9 above, 18 below, 42 predorsal of which 20 forward to occiput which opposite hind edge of orbit. Scales with 3 to 15 divergent spinuliferous keels, tips of last spinules not extended behind hind scale edge; circuli moderate, more or less complete.

D. II, 9—70 to 90, second ^{simple}~~simple~~ ray pungent, prolonged in filament, length 3 to $3 \frac{3}{5}$ in entire fish and its front edge basally with row of small antrorse serrae; interdorsal space $4 \frac{1}{4}$ in head; A. 90 to 95, fin height $3 \frac{1}{8}$; pectoral rays I, 19 or I, 20, fin $1 \frac{2}{3}$ to $1 \frac{4}{5}$ in head; ventral rays I, 7 or I, 8, fin $1 \frac{3}{5}$ to $1 \frac{2}{3}$.

Brown, head more or less pale or even whitish below. Edge of gill opening dark or dusky and inside blackish brown. Inside mouth dusky. Iris gray to whitish. Fins brown, with more or less dusky.

Japan.

U. S. N. M., No. 77265.

Albatross Collection (D.5067). Length 160 to 355 mm. 3 examples.

U. S. N. M., No. 77266.

Albatross Collection (D.5066). Length 347 mm.

U. S. N. M., No. 77267.

Albatross Collection (D.5059). Length 225 to 355 mm. 5 examples.

U. S. N. M., No. 77268.

Albatross Collection (D.5060). Length 353 mm.

U. S. N. M. No. 77269.

Albatross Collection (D.4909). Length 222 to w70 mm. 5 examples.

U. S. N. M., No. 77270.

Albatross Collection (D.5056). Length 281 mm.

U. S. N. M., No. 77271.

Albatross Collection (D.4915). Length 265 to 293 mm. 2 examples

U. S. N. M., No. 77272.

Albatross Collection (D.4911). Length 290 mm.

U. S. N. M., No. 77273.

Albatross Collection (D.5072). Length 327 mm.

U. S. N. M., No. 77274.

Albatross Collection (D.4912). Length 280 mm.

U. S. N. M., No. 77275.

Albatross Collection (D.4919). Length 218 mm.

U. S. N. M., No. 77276.

Albatross Collection (D.5065). Length 80 to 120 mm. 5 examples.

U. S. N. M., No. 77277.

In 434 fathoms. August 17, 1906.

Albatross Collection (D.4908). Length 190 to 233 mm. 2 examples.

Coryphaenoides mediterraneus (Giglioli)

Chalinura mediterranea Giglioli, Zool. Anzeiger, vol. 16, p. 344,

1893 (type locality : lat. 41°23'N., long. 7°8'54"E.; lat. 41°

18'42"N., long. 6°54'2"E.; Mediterranean; 2805 to 2904 meters).

—Garman, Mem. Mus. Comp. Zool., vol. 24, p. 395, 1899 (reference).

Macrurus (Chalinura) mediterranea Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 390, 1916 (reference).

Coryphaenoides mediterranea Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1916 (reference).

Coryphaenoides microps (Smith and Radcliffe)

Macrourus microps Smith and Radcliffe, Proc. U. S. Nat. Mus., vol.

43, p. 116, pl. 25, fig. 2, 1912 (type locality : Atulayan

Island, Eastern Luzon, in 560 fathoms; off northern Luzon, 220 fathoms

Coryphaenoides microps Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 144, 1915 (reference); Bull. U. S. Nat. Mus., No. 100,

vol. 1, p. 418, 1920 (types).

Depth $4 \frac{3}{4}$; head $4 \frac{3}{4}$, width $2 \frac{1}{8}$. Snout to eye $3 \frac{2}{5}$ in head; eye $7 \frac{1}{5}$, $2 \frac{1}{8}$ in snout, $1 \frac{2}{3}$ in in interorbital; orbit 6 in head, $1 \frac{2}{3}$ in snout, $1 \frac{2}{5}$ in interorbital; maxillary reaches opposite front eye edge, length to front end of maxillary $3 \frac{1}{3}$ in head; mandibular barbel $1 \frac{1}{5}$ in eye; teeth in villiform bands in jaws, of 5 to 7 irregular rows transversely; interorbital $4 \frac{1}{2}$ in head, low, convex. Gill rakers 1 + 8 low spinescent tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $1 \frac{1}{3}$ of eye.

Scales 80 in lateral line to pseudocaudal; 9 above, 17 below, 16 predorsal forward to occiput. Scales with 13 to 18 apical parallel spinuliferous ridges, last spinules passing behind hind scale edge; circuli rather fine, complete.

D. II, 9—51, second ^{simple}~~simple~~ ray long, slender, filamentous, with few weak denticles along front edge basally, length almost $\frac{1}{2}$ entire combined head and body to base of pseudocaudal; interdorsal space 5 in head; A. 70 fin height 3; pseudocaudal length 3; pectoral

rays I, 18, fin $1 \frac{4}{7}$ in head; ventral rays I, 6, fin $2 \frac{1}{6}$.

Brown. Head rather pale. Iris gray. Inside mouth brown.

Inside gill opening dusky. Fins all more or less blackish brown.

Philippines.

U. S. N. M., No. 72933, Hermanos Island (N.), N. 86° E., 16.75 miles (Lat. $18^{\circ}34'15''$ N., long. $121^{\circ}51'15''$ E.), off northern Luzon. In 224 fathoms. November 12, 1908. Albatross Collection (D.5325). Length 420 mm.

Coryphaenoides murrayi Günther

Coryphaenoides murrayi Günther, Ann. Mag. Nat. Hist., ser. 5,

vol. 2, p. 26, 1878 (type locality : deep sea east of New

Zealand, 1000 fathoms). — Garman, Mem. Mus. Comp. Zool.,

vol. 24, p. 395, 1899 (reference). — Gilbert and Hubbs,

Proc. U. S. Nat. Mus., vol. 51, p. 143, 1916 (reference).

Macrurus murrayi Gunther, Rep. Voy. Challenger, vol. 22, p. 146,

pl. 34, fig. A. 1887 (types).

Macrurus (Chalinura) murrayi Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 390, 1906 (reference). — Murray and

Hjort, Depths of the Ocean, p. 398, 1912 (lat. 35°36'N., long.

8°25'W., 1258 fathoms; lat. 50°22'N., long. 11°44'W., 983

fathoms.

Chalinura murrayi Goode and Bean, Oceanic Ichth., p. 412, 1895

(reference). — Waite, Rec. Canterbury Mus., vol. 1, No. 1,

p. 17, April 25, 1907 (reference).

Coryphaenoides nasutus Günther

Coryphaenoides nasutus Günther, Ann. Mag. Nat. Hist., ser 4,

vol. 20, p. 440, 1877 (type locality : south of Yeddo,

Japan). — Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. (144) 168 (Bungo Channel, Ki Channel, south west of

Suruga Gulf; east coast Hondo; Sagami Bay).

Macrurus nasutus Günther, Rep. Voy Challenger, vol. 22, p. 132,

pl. 30, fig. 3, 1887 (south of Yeddo, 565 fathoms; off

Imoshima, 345 fathoms). — Alcock, Ann Mag. Nat. Hist., ser.

6, vol. 8, p. 121, 1891 (Laccadive Sea, 738 fathoms). —

Goode and Bean, Oceanic Ichth., p. 390, 1895 (reference).

— Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396, 1899

(reference). — Gilbert and Hubbs, Bull. U. S. Nat. Mus.,

No. 100, vol. 1, p. 410, 1920 (reference).

Macrurus (Macrurus) nasutus Alcock, Cat. Deep Sea Fishes Indian

Mus., p. 111, 1899 (Andaman Sea, 490 fathoms; Arabian Sea 738

fathoms). — Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 15,

p. 389, 1906 (reference).

Macrourus nasutus Jordan and Snyder, Annot. Zool. Japan., vol.

3, p. 120, 1901 (reference). — Franz. Abhandl. Kan. Bayer,

Akad. Wiss., vol. 4, Suppl. band 1, p. 26, 1910 (Aburatsubo).

— Jordan, Tanaka, Snyder, Journ. College Sci. Tokyo, vol. 33,

p. 417, 1913 (compiled).

Macrurus brevirostris Alcock, Ann. Mag. Nat. Hist., ser. 6, vol.

4, p. 393, 1889 (type locality : Andaman Sea 7 1/2 miles east

of North Cinque Island, 490 fathoms); Journ. Asiatic Soc. Ben-

gal, vol. 63, p. 127, 1894 (); Illustrat. Zool.

Investigator, pt. 2, pl. 13, fig. 3, 1894. — Goode and Bean,

Oceanic Ichth., p. 390, 1895 (reference). — Garman, Mem. Mus.

Comp. Zool., vol. 24, p. 396, 1899 (reference).

Macrurus (Macrurus) brevirostris Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 203 (389), 1906 (east coast of Africa,

1019 to 1289 meters).

Lionurus brevirostris Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 146, 1916 (reference).

Depth $6 \frac{1}{4}$ to 8; head $4 \frac{1}{2}$ to $4 \frac{2}{3}$, width $2 \frac{1}{8}$ to $2 \frac{1}{5}$. Snout to eye $2 \frac{7}{8}$ to 3 in head; eye $4 \frac{3}{4}$ to $5 \frac{1}{8}$, $1 \frac{1}{2}$ to $1 \frac{2}{3}$ in snout, 1 to $1 \frac{1}{8}$ times interorbital; orbit $3 \frac{1}{4}$ to 4 in head, 1 to $1 \frac{1}{4}$ in snout, $1 \frac{1}{5}$ to $1 \frac{1}{4}$ times interorbital; maxillary reaches $\frac{1}{4}$ to $\frac{1}{2}$ in eye. length from front end $3 \frac{1}{6}$ to $3 \frac{1}{2}$ in head; mandibular barbel $2 \frac{2}{3}$ to 3 in eye; teeth in villiform bands in jaws, of 4 or 5 irregular series; interorbital $4 \frac{1}{2}$ to $5 \frac{1}{8}$ in head, low and nearly level in front. Gill rakers 1 + 8 low spinescent tubercles on second arch, about $\frac{1}{3}$ gill filaments, which $\frac{1}{2}$ of eye.

Scales 140 in lateral line to pseudocaudal; 7 or 8 above, 18 or 19 below, 42 to 45 predorsal. End of snout with 15 to 22 parallel series of long slender apical spines, last ones extending behind hind scale edge; circuli fine, not extended apically.

D. II, 10—90 to 100, second ^{simple}~~simple~~ ray slender and ending in filament, its front edge with row antrorse spinules, length 1 to $1 \frac{1}{10}$ in head; interdorsal space $1 \frac{1}{3}$ to $1 \frac{2}{5}$; A. 100 to 114, fin height $4 \frac{1}{2}$; pectoral rays I, 19, length 2 to $2 \frac{1}{8}$ in head; ventral I, 9, fin $2 \frac{1}{2}$ to $2 \frac{4}{5}$.

Largely uniform brownish, edge of gill opening dusky. Iris pale or light brown to gray. Inside mouth gray. Inside gill opening blackish. Fins brownish to dusky

Indian Ocean, Japan.

U. S. N. M., No. 56389.

Albatross Collection (D.3696). Length 270 to 380 mm. 4 examples.

U. S. N. M., No. 56390.

Albatross Collection (D.3721). Length 386 to 444 mm. 2 examples.

U. S. N. M., No. 56391.

Albatross Collection (D.). Length 208? mm.

U. S. N. M., No. 56392.

Albatross Collection (D.3699). Length 407 mm.

U. S. N. M., No. 56393.

May 10, 1900.

Albatross Collection (D.3711). Length 340 mm.

U. S. N. M., No. 77251.

Albatross Collection (D.3933).

Length 245 mm.

Albatross Collection (D.3934).

Length 270 mm.

Albatross Collection (D.3935).

Length 297 mm.

Albatross Collection (D.3936)

Length 248 mm.

Albatross Collection (D.4972). In 440 fathoms. August 30, 1906.

Length 157 to 260 mm. 5 examples.

U. S. N. M., No. 77253.

Albatross Collection (D.5045). Length 310 mm.

U. S. N. M., No. 77254.

In 544 fathoms. August 31, 1906.

Albatross Collection (D.4977). Length 233 to 252 mm. 2 examples.

U. S. N. M., No. 77255.

Albatross Collection (D.4971). Length 288 mm.

U. S. N. M., No. 77256.

Albatross Collection

Length 368 mm.

Albatross Collection (D.3939).

Length 377 mm.

Albatross Collection (D.3940).

Length 280 mm.

Albatross Collection (D.3941).

Length 315 mm.

Albatross Collection (D.4973).

Length 260 mm.

U. S. N. M., No. 77257.

Albatross Collection (D.4388). Length 382 mm.

U. S. N. M., No. 77258.

Albatross Collection (D.3891). Length 300 mm.

U. S. N. M., No. 77259.

Albatross Collection (D.4321).

Length 242 mm.

Albatross Collection (D.4322).

Length 222 mm.

Albatross Collection (D.5061).

Length 139 mm.

U. S. N. M., No. 77260.

Albatross Collection (D.3912)

Length 275 mm.

Albatross Collection (D.3913).

Length 288 mm.

Albatross Collection (D.3914).

Length 283 mm.

Albatross Collection (D.3915).

Length 310 mm.

U. S. N. M., No. 77261.

Albatross Collection (D.4378).

Length 357 mm.

Albatross Collection (D.4379).

Length 340 mm.

U. S. N. M., No. 77262.

Albatross Collection (D.3858).

Length 305 mm.

Albatross Collection (D.3860).

Length 265 mm.

Albatross Collection (D.3861).

Length 292 mm.

Albatross Collection (D.3865).

Length 320 mm.

Albatross Collection (D.4957).

U. S. N. M., No. 77263.

Albatross Collection (no number). Length 130 mm.

U. S. N. M., No. 77264.

Albatross Collection (D.3950).

Length ⁴⁰⁴~~317~~ mm.

Albatross Collection

Length 317 mm.

Albatross Collection (D.3955).

Length 330 mm.

Albatross Collection (D.3957).

Length 355 mm.

Albatross Collection (D.4289).

Length 310 mm.

Coryphaenoides obliquatus (Gilbert)

Macrourus obliquatus Gilbert, Bull. U. S. Fish Comm., vol. 23,

pt. 2, p. 670, fig. 261, 1903 (1905) (type locality : off

east coast of Kauai, 437 to 632 fathoms.

Macrurus (Macrurus) obliquatus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Lionurus obliquatus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 146, 1916 (reference). — Fowler, Mem. Bishop

Mus., vol. 10, p. 86, 1928 (compiled).

Depth $8 \frac{1}{5}$; head $5 \frac{1}{3}$, width $2 \frac{1}{4}$. Snout $3 \frac{1}{3}$ in head; eye $3 \frac{1}{3}$, 1 in snout; maxillary reaches $\frac{1}{3}$ in eye, length from front end $2 \frac{4}{5}$ in head; mandibular barbel (not shown in Gilbert's figure or mentioned in his description) $2 \frac{1}{2}$ in eye; teeth rather long, close set, pointed and in comparatively wide bands in jaws, anteriorly of 6 to 8 irregular series; Interorbital $4 \frac{1}{4}$ in head, low, depressed concavely forward. Gill rakers 1 + 8 low spinescent tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $2 \frac{4}{5}$ in eye.

Scales (pockets) 130 in lateral line to end of broken tail; 11? above, 22? below, 17? forward opposite front edge of orbit. Snout ends in small rounded spinescent tubercle. Scales with 5 nearly parallel rows of small slender spinules apically, last of which scarcely extend behind scale edge; circuli moderate, entire.

D. II, 11—128?, second simple ray pungent, with several antrorse spines along its front edge basally, fin height (all rays broken off terminal) at least 2 in head; interdorsal space $3 \frac{1}{3}$; A. 130?, fin height $4 \frac{1}{5}$?; pectoral rays I, 21, fin 2 in head; ventral rays I, 11 (largely broken off).

Largely uniform brownish.

Under half of head, breast and abdomen neutral black to brownish black. Iris dark gray. Inside mouth brown. Inside gill opening blackish brown. Fins dull brown.

Hawaiian Islands.

U. S. N. M., No. 51514.

In 437 to 632 fathoms.

Albatross Collection (D.4141). Length 131 mm. to end of broken tail.

Type of *Macrourus obliquatus*. This example unsatisfactory, largely darkened and in rather poor condition.

Coryphaenoides orthogrammus (Smith and Radcliffe)

Macrourus orthogrammus Smith and Radcliffe, Proc. U. S. Nat. Mus.,

vol. 43, p. 123, pl. 27, fig. 3, 1912 (type locality : Gomomo Island, Dutch East Indies, 1262 fathoms).

Coryphaenoides orthogrammus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 144, 1916 (reference); Bull. U. S. Nat. Mus., No. 100,

vol. 1, p. 421, 1920 (type). — Weber and Beaufort, Fishes Indo

Austral. Archip., vol. 5, p. 32, 1929 (compiled).

Depth $7 \frac{3}{4}$; head $4 \frac{3}{5}$, width $2 \frac{3}{4}$. Snout $3 \frac{2}{5}$ in head with median ridge above to its tip; eye $4 \frac{1}{5}$, $1 \frac{1}{8}$ in snout, $1 \frac{1}{4}$ in interorbital; maxillary reaches $\frac{1}{2}$ in eye, length from front end $3 \frac{1}{6}$ in head; mandibular barbel $\frac{1}{4}$ of eye; teeth minute, in villiform bands in jaws, 4 or 5 irregular rows transversely; interorbital $3 \frac{1}{4}$ in head, low, nearly level. Gill rakers $0 + 6$ low spinescent tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $2 \frac{2}{5}$ in eye.

Scales (pockets) 125 to end of broken tail; 7 above, 15? below, 18 forward in predorsal till opposite hind eye edge. Scales with 5 parallel apical rows of long slender spines, giving body villose appearance, last ones extended well beyond hind scale edge; circuli coarse, few, complete.

D. II, 11—88, second simple ray (broken) $1 \frac{3}{4}$? in head; interdorsal space $4 \frac{1}{2}$; A. 100, fin height 4; pectoral rays I, 21, fin $1 \frac{3}{4}$; ventral rays I, 9, fin $1 \frac{1}{2}$ in head, first ray filamentous

Brown. Under surface of head, branchiostegal region and opercles blackish, also breast. Belly dark brown. Iris neutral slate. Inside mouth gray. Inside gill opening blackish. Fins all brownish.

East Indies. Characteristic with sharp pointed projecting snout and its scales quite villose. Coloration obscure.

U. S. N. M., No. 72940. Lat. $1^{\circ}55'S.$, long. $127^{\circ}42'30"E.$

Albatross Collection (D.). Length 168 mm. Type of Macrou-
rus orthogrammus.

Coryphaenoides orbitalis (Garman)

Macrurus orbitalis Garman, Mem. Mus. Comp. Zool., vol. 24, p. 207

(397), pl. 47, figs. 1-1b, 1899 (type locality : lat. $7^{\circ}32'36''$ N.,

long. $79^{\circ}16'$ W., east of Cape Mala, Gulf of Panama, 286 fathoms).

Macrurus (Macrurus) orbitalis Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 388, 1906 (reference).

Macrourus orbitalis Jordan, Evermann, Clark, Rep. U. S. Comm. Fisher.,

pt. 2, p. 206, 1930 (reference).

Lionurus orbitalis Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51,

p. 146, 1916 (reference).

Depth $5 \frac{3}{4}$ to $6 \frac{7}{8}$; head 4 to $4 \frac{1}{2}$, width 2 to $2 \frac{1}{8}$. Snout to eye $3 \frac{1}{5}$ to $3 \frac{1}{2}$? in head; eye $4 \frac{1}{3}$? to $4 \frac{2}{3}$, $1 \frac{1}{4}$ in snout, $1 \frac{1}{4}$ to $1 \frac{1}{2}$ times interorbital; orbit $3 \frac{1}{4}$ to $3 \frac{1}{2}$ in head, $1 \frac{1}{6}$ to $1 \frac{1}{4}$ times snout, $1 \frac{1}{2}$ to $1 \frac{2}{3}$ times interorbital; preoral length $4 \frac{2}{5}$ to $4 \frac{4}{5}$ in head; maxillary reaches $\frac{1}{2}$ in eye, length from front end $3 \frac{1}{4}$ to $3 \frac{1}{2}$ in head; mandibular barbel $2 \frac{1}{2}$ to $3 \frac{4}{5}$ in orbit; teeth minute, in villiform bands in jaws, of 5 or 6 irregular rows; interorbital $5 \frac{1}{6}$ to 6 in head; low, nearly level or slightly depressed. Gill rakers 1 + 9 low spinescent tubercles on second arch, $\frac{1}{5}$ of gill filaments, which $1 \frac{2}{3}$ in orbit.

Scales (pockets) 105 in lateral line; 8 above, 16? below, 18

predorsal forward opposite hind orbital edge. Scale with 9 or 10 irregular rows of apical denticles, not extending behind scale edge; circuli fine, complete.

D. II, 9—50? to 106, second simple ray slender, front edge with row of antrorse denticles, length $1 \frac{2}{3}$? to $1 \frac{3}{4}$ in head; interdorsal space $2 \frac{1}{3}$ to $2 \frac{2}{3}$; A. 98, fin height $3 \frac{2}{3}$?; pectoral rays I, 19, fin $1 \frac{4}{5}$ to $2 \frac{1}{5}$? in head; ventral rays I, 8, fin $2 \frac{1}{3}$ to 3.

Brown, muzzle and front of head little pale. Iris dark gray. Inside mouth pale. Inside gill opening blackish brown, well inside pale below. Under surface of mandible, branchiostegal region, chest, breast and belly dark or neutral black. Fins all brownish, neutrals dusky.

Gulf of Panama.

U. S. N. M., No. 57856. Lat. $7^{\circ}32'36''$ N., long. $79^{\circ}16'$ W. In 286 fathoms

Albatross Collection (D.3385). Length 130 mm. 2 examples.

Coryphaenoides paradoxus (Smith and Radcliffe)

Macrourus paradoxus Smith and Radcliffe, Proc. U. S. Nat. Mus.,

vol. 43, p. 115, pl. 25, fig. 1, 1912 (type locality : eastern

Palawan, 1105 fathoms).

Coryphaenoides paradoxus Gilbert and Hubbs, Bull. U. S. Nat. Mus.,

No. 100, vol. 1, p. 409, 1920 (type).

Coryphaenoides pectoralis (Gilbert)

Macrurus (Malacocephalus) pectoralis Gilbert, Proc. U. S. Nat.,

Mus., vol. 14, p. 563, 1891 (type locality : off Oregon, 685

to 877 fathoms). — Brauer, Deutsch. Tiefsee Exped. Valdivia,

vol. 15, p. 391, 1906 (reference).

Albatrossia pectoralis Jordan and Evermann, Bull. U. S. Nat. Mus.,

No 47, pt. 3, p. 2573, 1898 (copied). — Jordan and Gilbert,

Rep. Fur Seal Investig., vol. 3, p. 487, 1899 (off Bogoslof

Island, 664 fathoms). — Evermann and Goldsborough, Bull. Bur.

Fisher., vol. 26, p. 349, 1906 (1907) (copied). — Jordan, Ever-

mann, Clark, Rep. U. S. Comm. Fisher., pt. 2, p. 204, 1928 (1930)

(compiled).

Malacocephalus pectoralis Garman, Mem. Mus. Comp. Zool., vol. 24,

p. 395, 1899 (reference).

Nematonurus pectoralis Gilbert and Hubbs, Proc. U. S. Nat., Mus.,

vol. 51, p. 161, 1919 (off south east Saghalin Island; east

coast Saghalin Island; off southern Hokkaido; 309 to 510 meters).

Macrurus (Nematonurus) magnus Gill and Townsend, Proc. Biol. Soc.

Washington, vol. 11, p. 234, 1897 (type locality : Bering Sea

south west of Pribilof Islands.

Depth $6 \frac{7}{8}$ to $7 \frac{3}{4}$; head $4 \frac{4}{5}$ to $5 \frac{2}{5}$, width 2 to $2 \frac{1}{4}$.
Snout to eye $3 \frac{4}{5}$ to $7 \frac{4}{5}$ in head; eye $5 \frac{1}{2}$ to 7, $1 \frac{3}{5}$ to $1 \frac{4}{5}$ in snout, $1 \frac{2}{5}$ to 2 in interorbital; orbit $4 \frac{1}{2}$ to $4 \frac{2}{3}$ in head, equals snout, $1 \frac{1}{5}$ to $1 \frac{1}{4}$ in interorbital; maxillary reaches well beyond eye, length from front end $2 \frac{1}{5}$ to $2 \frac{1}{3}$ in head; teeth simple, conic, erect, anteriorly 3 or 4 irregular series narrowing posteriorly and lower teeth uniserial; interorbital $3 \frac{3}{4}$ to 4 in head, low, nearly level. Gill rakers 3 + 12 short spinescent tubercles on second arch, $1 \frac{1}{2}$ of gill filaments, which $1 \frac{1}{2}$ in eye.

Scales 162 to 166 in lateral line of which 30 forward of vent; 9 or 10 above, 23 below, 80 predorsal of which 34 forward till opposite hind eye edge. Scales on head all smaller than on body. Scales with 5 radiating apical striae, each of which not extended beyond scale edge; circuli moderately coarse.

D. I, 9—100 to 128, first branched ray $2 \frac{1}{8}$ to $2 \frac{1}{3}$? in head;

A. 80 to 120, fin height $3 \frac{1}{4}$ to $3 \frac{3}{5}$; pseudocaudal 3 to 7; pectoral rays I, 16, fin 1 $\frac{9}{10}$ to 2 in head; ventral rays I, 6, fin $2 \frac{1}{5}$ to $2 \frac{1}{4}$.

Dusky brown, more or less uniform. Fins dusky. Iris gray. Inside mouth and gill opening blackish. Where scales have fallen pockets show as dark brown reticulations.

North Pacific, Bering Sea. A large massive species, with long tapering body, strong dentition and obtuse head.

U. S. N. M., No. 47235.

Albatross Collection (). Length 700 mm. Type of Macrurus
(Malacocephalus) pectoralis.

U. S. N. M., No. 47236.

Albatross Collection (). Length 530 mm to end of broken
tail. Paratype of Macrurus (Malacocephalus) pectoralis.

U. S. N. M., No. 48770.

Albatross Collection ().

Length 1080 mm. Type of Macrurus (Nematonurus) magnus.

Albatross Collection ().

Length 983 mm. Paratype of Macrurus (Nematonurus) magnus.

U. S. N. M., No. 49094.

Albatross Collection (). Length 730 mm.

U. S. N. M., No. 77250.

Albatross Collection (). Length 645 mm.

Coryphaenoides polylepis (Alcock)

Macrurus polylepis Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 4,

p. 395, 1889 (type locality : lat. 20°17'30"N., long. 88°51'E.,

Bengal Bay, 193 fathoms; lat. 19°35'N., long. 92°24'E., 272

fathoms). —Alcock, Journ. Asiatic Soc. Bengal, vol. 63, pt. 2,

p. 127, 1894 (). —Goode and Bean, Oceanic Ichth., p.

390, 1895 (reference). —Garman, Mem. Mus. Comp. Zool., vol.

24, p. 396, 1899 (reference). —Alcock, Illustrat. Zool.

Investigator, pt. 7, pl. 29, fig. 4, 1900.

Macrurus (Macrurus) polylepis Alcock, Cat. Deep Sea Fishes Indian

Mus., p. 112, 1899 (Bengal Bay, 193 to 272 fathoms).

Lionurus polylepis Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 146, 1916 (reference).

Coryphaenoides propinquus (Gilbert and Cramer)

Macrourus propinquus Gilbert and Cramer, Proc. U. S. Nat. Mus.,

vol. 19, p. 424, pl. 42, fig. 2, 1897 (type locality : Hawaiian

Islands, 313 to 315 fathoms). —Gilbert, Bull. U. S. Fish Comm.,

vol. 23, pt. 2, p. 667, 1903 (1905) (off Kauai, 286 to 476 fathoms).

Macrurus propinquus Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396,

1899 (reference).

Macrurus (Macrurus) propinquus Brauer, Deutsch. Tiefsee Exped. Valdivia,

vol. 15, p. 389, 1906 (reference).

Lionurus propinquus Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 446, 1916 (reference).

Coryphaenoides propinquus Fowler, Mem. Bishop Mus., vol. 10, p. 86,

1928 (Hawaiian Islands).

Depth 6 to $6 \frac{1}{2}$; head $5 \frac{1}{2}$ to $5 \frac{3}{4}$, width $1 \frac{4}{5}$ to $1 \frac{7}{8}$.
 Snout $3 \frac{2}{5}$ to 4 in head; eye $3 \frac{2}{5}$ to $3 \frac{1}{2}$, greater than snout
 or interorbital; preoral length but little inclined from vertical,
 length $3 \frac{2}{3}$ to $4 \frac{1}{2}$ in head; maxillary reaches $\frac{1}{4}$ to $\frac{1}{2}$ in eye,
 length from front end 3 to $3 \frac{1}{8}$ in head; mandibular barbel $1 \frac{1}{3}$
 to $1 \frac{1}{2}$ in eye; teeth in villiform bands in jaws, of 4 or 5 irregular
 rows above with outer row slightly enlarged and below 6 or 7 irregular,
 small, uniform; interorbital $4 \frac{1}{8}$ to $4 \frac{1}{4}$ in head, low, nearly
 level. Gill rakers 0 + 7 low spinescent tubercles on second arch, $\frac{1}{3}$
 of gill filaments, which $2 \frac{1}{2}$ in eye.

Scales 137 in lateral line; 14 above, 17 below, 38? predorsal of
 which 20 forward till opposite hind eye edge. Scales with 6 to 8 para-
 llel apical rows of slender and rather long spinules, last well extended
 beyond scale edge; circuli moderate, complete.

D. II, 13—114, second simple ray slender, with row of antrorse
 denticles along front edge, length $1 \frac{1}{5}$ to $1 \frac{1}{4}$ in head; interdorsal
 space $2 \frac{3}{4}$ to 3 ; A. 100, fin height $3 \frac{1}{8}$ to $4 \frac{1}{5}$ in head; pectoral
 rays I, 20, fin $1 \frac{2}{3}$ to $1 \frac{3}{4}$ in head; ventral I, 15, fin nearly long
 as head and first ray ends in long filament.

Brown. Head little paler than body. Branchiostegal region,
 breast, belly and chest dark neutral gray to blackish. Iris Gray.
 Gill openings largely dark inside. Fins all pale.

Hawaiian Islands. A small species, in alcohol distinguished by
 its pale yellowish vertical fins, the first dorsal darker terminally.

U. S. N. M., No. 47702.

In 351 fathoms.

Albatross Collection (D.3473). Length 198 mm.

U. S. N. M., No. 47741.

In 351 fathoms.

Albatross Collection (D.3475). Length 150 mm. Type of Macrourus
propinquus.

U. S. N. M., No. 55244.

Albatross Collection (). Length 152 to 182 mm. 7 examples.

U. S. N. M., No. 55245.

Albatross Collection (). Length 105 to 187 mm. 35 examples.

U. S. N. M., No. 55262.

Albatross Collection (). Length 115 to 155 mm. 5 examples.

Coryphaenoides rudis Günther

Coryphaenoides rudis Günther, Ann. Mag. Nat. Hist., ser. 5, vol. 2,

p. 24, 1878 (type locality : Pacific Ocean north of Kermadec Island,

500 to 650 fathoms). —Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 144, 1916 (reference).

Macrurus rudis Günther, Rep. Voy. Challenger, vol. 22, p. 131, pl. 27,

1887 (types, in 520 to 630 fathoms). —Goode and Bean, Oceanic Ichth.,

p. 390, 1895 (reference). —Garman, Mem. Mus. Comp. Zool., vol. 24,

p. 396, 1899 (reference).

Macrurus (Macrurus) rudis Brauer, Deutsch. Tiefsee Exped. Valdivia, vol.

15, p. 264 (389), 1906 (lat. 3°7'S., long. 40°45'8"E., off East Africa,

748 meters).

Macrourus rudis Waite, Rec. Canterbury Mus., vol. 1, No. 1, p. 17, April

25, 1907 (reference). —Franz, Abhandl. Bayer. Akad. Wiss., vol. 4,

suppl. band 1, p. 26, 1910 (Aburatsubo). —Jordan, Tanaka, Snyder,

Journ. College Sci., Tokyo, vol. 33, p. 417, 1913 (compiled).

Coryphaenoides rupestris Gunner

Coryphaenoides rupestris Gunner, Thronhj. Selsk. Skrift., vol.

3, pp. 50, 51, pl. 3, figs. 1-2, 1765 (type locality : Don-

theim, Norway). —Day, Fishes Great Britain, vol. 1, p. 335,

pl. 93, 1880-84 (Shetland Islands; Faroes). —Miner, Rep. U.

S. Fish Comm., pt. 11, p. 185, 1883 (1885) (Lat. 39°26'16"N.,

long. 70°2'37"W., 1362 fathoms). —Jordan and Gilbert, Bull.

U. S. Nat. Mus., No. 16, p. 812, 1883 (compiled). —Jordan,

Rep. U. S. Fish Comm., pt. 13, p. 919, 1885 (1887) (reference).

—T. H. Bean, Bull. U. S. Fish Comm., vol. 7, p. 243, 1887

(1888) (lat. 36°50'N., long. 74°33'W.). —Goode and Bean,

Oceanic Ichth., p. 402, 1895 (Gulf Stream). —Jordan and Ever-

mann, Bull. U. S. Nat. Mus., No. 47, pt. 3, p. 2579, 1898

(copied). —Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396,

1899 (reference). —Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1916 (reference). —Jordan, Evermann, Clark,

Rep. U. S. Comm. Fisher., pt. 2, p. 205, 1930 (reference).

Macrurus rupestris Smitt, Scandinavian Fishes, vol. 2, p. 590,

pl. 27 A., fig. 2, 1895 (Helgeland, Trondhjem Fjord, Bjørnør

Arendal, Christiania, Bohuslan, between Koster and Weather

Islands, Svanger, Skaw). — Collett, Res. Camp. Sci. Monaco,

vol. 10, p. 69, pl. 3, fig. 11, 1896 (lat. 46°50'6"N., long.

50°11'45"W., 155 meters). — Köhler, Ann. Univ. Lyon, vol. 26,

p. 494, 1896 (Gulf of Gascony, 800 to 1410 meters).

Macrurus (Coryphaenoides) rupestris Günther, Rep. Voy. Challenger,

vol. 22, p. 138, 1887.

Macrurus stroemii Reinhardt, Dansk. Vidensk. Selsk. Naturv.

Afh., vol. 5, p. 19, 1828.

Lepidoleprus norvegicu Nilsson, Prodr. Ichth. Scand., p. 51, 1832

(type locality : Norway).

Macrourus norvegicus Nilsson, Skand. Fisk., p. 600, 1855.

Macrurus norvegicus Gill, Cat. Fishes East Coast, p. 49, 1861 (name).

Coryphaenoides norvegicus Günther, Cat. Fishes Brit. Mus. vol. 4, p.

396, 1862 (Compiled). — Gill, Rep. U. S. Fish Comm. pt. 1, p. 795,

1871 (1873) (name).

Depth 6 to $6 \frac{3}{5}$; head $4 \frac{2}{3}$ to $5 \frac{1}{5}$, width 2 to $2 \frac{1}{4}$. Snout to eye $3 \frac{1}{3}$ to $3 \frac{2}{3}$ in head; eye $3 \frac{1}{3}$ to $5 \frac{1}{4}$, 1 to $1 \frac{1}{2}$ in snout, $1 \frac{1}{4}$ to $1 \frac{7}{8}$ in interorbital; orbit $3 \frac{1}{8}$ to $3 \frac{3}{5}$ in head, 1 in snout, $1 \frac{1}{6}$ to $1 \frac{1}{4}$ in interorbital; maxillary reaches $\frac{3}{4}$ to $\frac{4}{5}$ in eye, length from front ed $2 \frac{7}{8}$ to 3 in head; mandibular barbel 4 to 7 in eye; teeth small, in 3 or 4 irregular series, upper outer series little enlarged; interorbital $2 \frac{1}{2}$ to 3 in head, broadly convex. Gill rakers 4 + 14 low points on second arch, $\frac{1}{2}$ of gill filaments, which $3 \frac{1}{2}$ in eye.

Scales 170 in lateral line; 11 above, 22 below, 50 predorsal of which about 20 to occiput. Scales with 22 to 25 irregular series of long slender apical spinules, last of which extend well beyond scale edge; circuli moderate, not extended apically.

D. II, 10-167 to 170, with second simple ray slender and its front edge with row of antrorse spines, first branched ray $1 \frac{2}{3}$ to $1 \frac{3}{4}$ in head; interdorsal space 2 to $2 \frac{3}{4}$; A. 178 to 180, fin height $3 \frac{3}{4}$ to $4 \frac{1}{4}$ in head; pectoral rays I, 16, fin $1 \frac{1}{2}$ to $1 \frac{7}{8}$ in head; ventral I, 7, fin $1 \frac{1}{5}$ to $1 \frac{2}{5}$ times head, first simple ray long and filamentous.

Uniform brownish. Iris pale to whitish. Inside mouth brown. Inside gill opening blackish brown. Fins more or less dusky.

North Atlantic. Young often with pale or even slightly silvered tints on sides of head and trunk.

U. S. N. M., No. 17364. Bergen, Norway. Swedish Government.
Length 707 mm.

U. S. N. M., No. 23417. 36 miles E. of N. E. Light off Sable
Island. August 1879. C. Ruckley. Length 75? to 200? mm. 2
examples in poor condition.

U. S. N. M., No. 26347. South Banquereau. In 150 fathoms.
October 6, 1880. Capt. Jerome McDonald. Schooner "G. P. White".
Length 743 mm.

U. S. N. M., No. 31859. Lat. $39^{\circ}52'N.$, long. $70^{\circ}30'W.$ In
554 fathoms. October 4, 1882. U. S. Fish Comm. (D.1155). Length
425 to 507 mm.

U. S. N. M., No. 32687. Lat. $37^{\circ}16'30"N.$, long. $74^{\circ}26'36"W.$
March 23, 1883.

Albatross Collection (A.5). Length 610 mm.

U. S. N. M., No. 32688. Lat. $37^{\circ}16'30"N.$, long. $74^{\circ}26'36"W.$
March 28, 1883.

Albatross Collection (A 6). Length 570 mm.

U. S. N. M., No. 33441. Lat. $41^{\circ}11'30"N.$, long. $66^{\circ}12'20"W.$
September 4, 1883.

Albatross Collection (D.2078). Length 430 mm.

U. S. N. M., No. 35444. Lat. $39^{\circ}25'50"N.$, long. $71^{\circ}49'30"W.$

July 23, 1884.

Albatross Collection (D.2180). Length 787 mm.

U. S. N. M., No. 38086. Lat. 39°50'N., long 70°26'W. In 555 fathoms. July 16, 1886.

Length 590 mm.

U. S. N. M., No. 38160. Lat. 36°45'N., long. 74°28'30"W. In 581 fathoms. October 25, 1886. Albatross Collection (D.2731).

Length 660 mm.

U. S. N. M., No. 39250. Lat. 38°35'N., long. 73°5'15"W. In 554 fathoms. September 18, 1887. Albatross Collection (D.2744).

Length 215 mm.

U. S. N. M., No. 44253. Lat. 39°51'N., long. 70°17'W.

Albatross Collection (D.2528).

Length 687 mm.

U. S. N. M., No. 44254. Lat. 41°47'N., long. 65°37'30"W.

July 13, 1885. Albatross Collection

Length 765 mm.

U. S. N. M., No. 45824. Lat. 41°11'30"N., long. 66°12'20"W.

In 499 fathoms. September 4, 1883. Albatross Collection (D.2078).

Length ³⁸⁵~~335~~ mm. In poor preservation.

U. S. N. M., One example. No. locality. No 16/75. Length
637 mm.

U. S. N. M., One example.

Albatross Collection (D.2429). Length 123m

U. S. N. M., One example.

Albatross Collection (D.2546). Length 238 mm.

Coryphaenoides sclerorhynchus (Valenciennes)

Macrourus sclerorhynchus Valenciennes, Hist. Nat. Iles Canaries,

Poiss., vol. 2, pt. 2, p. 80, 1836-44 (type locality : Lanzarote,
Arecife, Canary Islands).

Macrurus sclerorhynchus Günther, Cat. Fishes Brit. Mus., vol. 4,

p. 394, 1862 (type); Rep. Voy. Challenger, vol. 22, p. 133, pl.

32, fig. A, 1887 (90 miles south east Cape St. Vincent, 1090

fathoms). — Vaillant, Expéd. Sci. Travailleur et Talisman,

Poiss., p. 237, pl. 22, figs. 2a-c (scale), 1888 (off Morocco;

Canaries; Soudan; Banc d'Arguin; Cape Verde; Cape Verde ^sIlands;

Azores; 540 to 3655 meters). — Carus, Prodr. Medit., vol. 2,

p. 583, 1893 (compiled). — Goode and Bean, Oceanic Ichth., p.

391, 1895 (reference). — Collett, Rés. Camp. Sci. Monaco, vol.

10, p. 78, 1896 (Strait of Pico-Fayal, Azores, 800 meters). —

Comp. Zool., vol. 24, p. 396, 1899 (reference). — Murray and

Hjort, Depths of the Ocean, p. 397, 1912 (south of Portugal;

Canaries; mid North Atlantic; south of England; Orkneys; 747 to

1706 fathoms).

Macrurus (Macrurus) sclerorhynchus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 205 (390), 1906 (Gulf of Aden, 1840 meters).

Macrurus Sclerochynchus Roule, Rés. Camp. Sci. Monaco, vol. 52, p.

79, 1919 (south east of Flores; 60 miles south south east of

Cape St. Vincent; 55 miles north north west of Fayal, Azores;

1743 to 1900 meters). (Error.)

Lepidoleprus sclerorhynchus Valenciennes, Hist. Iles Canaries, Poiss.,

vol. 2, pt. 2, pl. 14, fig. 1, 1836-44.

Lionurus sclerorhynchus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 146, 1916 (reference).

Of the following materials, both poorly preserved and small, I am unable to make out few of the characters, insufficient for description.

U. S. N. M., No. 42092.

Paris Museum (86 + 167). Length 105 mm.

U. S. N. M., No. 42104.

Paris Museum (86 + 164). Length 75 mm.

Coryphaenoides semiquincunciatus (Alcock)

Macrurus semiquincunciatus Alcock, Ann. Mag. Nat. Hist., ser. 6,

vol. 4, p. 312, Nov. 1889 (type locality : Bay of Bengal south

by west of north Sentinel Island, Andamans, 130 to 250 fathoms);

ser. 6, vol. 8, p. 121, 1891 (Laccadive Sea, 240 to 276 fathoms);

ser. 6, vol. 10, p. 351, 1892 (Station 131, 410 fathoms); Journ.

Asiatic Soc. Bengal, vol. 63, pt. 2, p. 127, 1894 ();

Illustrat. Zool. Investigator, pt. 2, pl. 12, fig. 2, 1894. —

Goode and Bean, Oceanic Ichth., p. 390, 1895 (reference). —

Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396, 1899 (reference).

Macrurus (Macrurus) semiquincunciatus Alcock, Cat. Deep Sea Fishes

Indian Mus., p. 111, 1899 (Andaman Sea; Bengal Bay; 240 to 410

fathoms). — Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 15,

p. 261 (388), 1906 (east coast of Africa, 463 to 977 meters).

Lionurus semiquincunciatus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 146, 1916 (reference).

Coryphaenoides semiscaber Gilbert and Hubbs

Coryphaenoides semiscaber Gilbert and Hubbs, Bull, U. S. Nat. Mus.,

No. 100, vol. 1, p. 410, fig. 6, 1920 (type locality : east of

Masbate Island, 604 fathoms).

Coryphaenoides serratus (Lowe)

Macrourus serratus Lowe, Proc. Zool. Soc. London, vol. 11, p. 91,

1843 (type locality : Madeira).

Macrurus serratus Goode and Bean, Oceanic Ichth., p. 392, 1895

(reference). —Roule, Rés. Camp. Sci. Monaco, vol. 52, p. 79,

1919 (50 miles off Mogador; 3 miles east of Lanzarote; 5 miles

north east of Maio; 7 miles south west of Sal; Cape Verde Islands;

6 miles south São Miguel; 30 miles east of Terceira; 3 miles north

of Fayal; north of São Jorge; between Pico and São Jorge; 950 to

2165 meters). —Vaillant, Rés. Camp. Sci. Monaco, vol. 52, p. 134,

1919 (lat. 37° to 38°N., long 23° to 25°W., 1230 to 1622 meters).

Coryphaenoides serratus Günther, Cat. Fishes Brit. Mus., vol. 4,

p. 396, 1862 (copied).

Macrurus smiliophorus Vaillant, Exped. Sci. Travailleur et Talisman,

Poiss., p. 242, pl. 22, figs. 1a-d, 1888 (type locality : Gulf of

Gascony; Morocco; Soudan; Cape Verde Islands; 460 to 1319 meters).

Coryphaenoides serrulatus Günther

Coryphaenoides serrulatus Günther, Ann. Mag. Nat. Hist., ser. 5,
vol. 2, p. 26, 1878 (type locality : North east of New Zealand,
700 fathoms). — Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.
51, p. 144, 1916 (reference).

Macrurus serrulatus Goode and Bean, Oceanic Ichth., p. 390, 1895
(reference). — Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396,
1899 (reference).

Macrurus (Macrurus) serrulatus Brauer, Deutsch. Tiefsee Exped.
Valdivia, vol. 15, p. 389, 1906 (reference).

Macrourus serrulatus Waite, Rec. Canterbury Mus., vol. 1, No. 1,
p. 17, April 25, 1907 (reference).

Coryphaenoides sibogae Weber and Beaufort

Coryphaenoides sibogae Weber and Beaufort, Fishes Indo Austral.

Arch., vol. 5, p. 29, 1929 (type locality : Flores Sea, 694

meters).

Coryphaenoides simulus (Goode and Bean)

Chalinura simula Goode and Bean, Bull. Mus. Comp. Zool., vol. 10,

No. 5, p. 189, 1883 (type locality : lat 41°25'45"N., long. 65°

35'30", Gulf Stream, 1242 fathoms). —Miner, Rep. U. S. Fish

Comm., pt. 11, p. 185, 1883 (1885) (Lat. 38°44'N., long. 72°

38', 1209 fathoms; lat 38°47'20"N., long. 72°37', 1091 fathoms).

—Jordan, Rep. U. S. Fish Comm., pt. , p. 132, 1885 (1887)

(name). —Goode and Bean, Oceanic Ichth., p. 412, pl. , fig.

345, 1895 (Gulf Stream lat. 31° to 41°N., long. 65° to 78°W., 333

to 1731 fathoms). —Jordan and Evermann, Bull. U. S. Nat. Mus.,

No. 47, pt. 3, p. 2578, 1898 (copied). —Garman, Mem. Mus. Comp.

Zool., vol. 24, p. 395, 1899 (reference).

Macrurus simulus Günther, Rep. Voy. Challenger, vol. 22, p. 145, 1887

(compiled).

Macrurus (Chalinura) simulus Brauer, Deutsch. Tiefsee Exped. Valdivia,

^{vol.}
~~vol.~~ 15, p. 390, 1906 (reference). —Murray and Hjort, Depths of

the Ocean, p. 398, 1912 (Lat. 34°59'N., long. 33°1'W., Azores, 1430

to 1567 meters).

Depth 7 to $7 \frac{1}{5}$; head 5 to $5 \frac{1}{8}$, width $2 \frac{1}{8}$ to $2 \frac{2}{5}$.
 Snout 4 to $4 \frac{1}{5}$ in head; eye $6 \frac{1}{2}$, $1 \frac{3}{5}$ to $1 \frac{3}{4}$ in snout,
 $1 \frac{2}{5}$ to $1 \frac{1}{2}$ in interorbital; predorsal short, vertical, less
 than $1 \frac{1}{3}$ in eye; maxillary reaches opposite hind eye edge,
 length from front end $2 \frac{1}{4}$ to $2 \frac{1}{3}$ in head; mandibular barbel
 $4 \frac{1}{2}$ to $4 \frac{7}{8}$; teeth in villiform bands in jaws, above forming
 4 or 5 irregular rows with outer enlarged all around and lower
 row single enlarged row; interorbital $4 \frac{1}{8}$ to $4 \frac{2}{3}$, low,
 depressed or only very slightly convex. Gill rakers 2 + 11, low
 spinescent tubercles on second arch, $2 \frac{1}{5}$ in gill filaments,
 which $2 \frac{1}{5}$ in eye.

Scales (pockets) 150 in lateral line; 8 above, 17 to 19 below, 45 predorsal forward to front of snout, of which 30? forward opposite hind eye edge. Scales with 7 parallel apical spinuliferous ridges, last spinules extended behind scale edge; circuli moderate, complete.

D. II, 9-113, second simple ray slender, front edge with row of antrorse denticles, length $1 \frac{2}{5}$ to $1 \frac{3}{5}$ in head; interdorsal space $2 \frac{3}{4}$ to $3 \frac{1}{5}$; A. 118, fin height $3 \frac{1}{3}$ to $4 \frac{1}{4}$ in head; pectoral I, 16 to I, 19, fin $1 \frac{3}{5}$ to $1 \frac{2}{3}$ in head; ventral rays I, 8, fin $1 \frac{1}{4}$ to $1 \frac{1}{2}$.

Brown, head often paler. Iris gray. Inside mouth paler. Inside gill opening blackish brown. Hind edges of gill openings blackish brown. Fins all pale.

Western North Atlantic. Closely related to Coryphaenoides brevibarbis (Goode and Bean), differing chiefly in its large barbel, always exceeding the eye. Thus the figure by Goode and Bean of their Chalinura simula is misleading, as it shows a very short barbel.

U. S. N. M., No. 33280.

Length 510 mm.

U. S. N. M., No. 38081. Lat. $38^{\circ}27'N.$, long. $70^{\circ}54'W.$

Albatross Collection (). Length 528 mm.

U. S. N. M., No. 38103. Lat. $38^{\circ}20'N.$, long $70^{\circ}68'W.$

Albatross Collection (). Length 330 mm to end of
broken tail

U. S. N. M., No. 38138. Lat. $36^{\circ}47'N.$, long. $73^{\circ}9'W.$

Albatross Collection (). Length 425 mm.

U. S. N. M., No. 39152. Lat. $39^{\circ}N.$, long. 70° W.

Albatross Collection (). Length 370 mm.

U. S. N. M., No. 45830.

Albatross Collection (B.2571). Length 327 to 358 mm. 2 examples.

U. S. N. M., No. 54349.

Length 830 mm.

U. S. N. M., No. 61255.

Length 720 mm. Scales all lost.

U. S. N. M., 5 examples. Lat. $37^{\circ}50'N.$, long. $73^{\circ}3'W.$ In
1395 fathoms

Albatross Collection (D. 2105). Length 255 to 460 mm. 4 examples,
all poorly preserved.

Coryphaenoides spinosus (Gilbert and Hubbs)

Lionurus spinosus Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. (146) 199, pl. 10, fig. 2, 1916 (type locality : Eastern

Sea, 427 fathoms).

Coryphaenoides spinulosus (Gilbert and Burke)

Chalinura spinulosus Gilbert and Burke, Bull. Bur. Fisher., vol.

30, p. 92, figs. 36-36a (scale), 1910 (1912) (type locality :

off Avatcha Bay, east of Kamchatka, 682 fathoms).

Coryphaenoides spinulosus Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1916 (reference).

Depth $6 \frac{1}{4}$; head $5 \frac{1}{10}$, width 2. Snout 4 in head; orbit $3 \frac{1}{2}$, $1 \frac{1}{5}$ times snout, $1 \frac{1}{4}$ times interorbital; maxillary reaches $\frac{4}{5}$ in orbit, length from front end $2 \frac{1}{4}$ in head; mandibular barbel $1 \frac{4}{5}$ in orbit; teeth small, in 3 or 4 series in jaws, outer upper row little larger and also inner lower row; interorbital $4 \frac{1}{4}$ in head, low. Gill rakers 1 + 10, low tubercles on second arch, $\frac{1}{4}$ of gill filaments, which $\frac{1}{2}$ of eye.

Scales 138? in lateral line; 9 above, 19 or 20 below, 21 predorsal forward to occiput. Scales with 5 apical radiating series of spinules, last of which extend back beyond hind scale edge; circuli fine, complete.

D. II, 9-118? to end of broken tail, second slender simple ray entire, length $1 \frac{1}{4}$? in head; interdorsal length 6; A. 105?, fin height $4 \frac{1}{8}$; pectoral rays I, 18, fin $1 \frac{7}{8}$ in head; ventral rays I, 7, fin $1 \frac{3}{4}$.

Largely uniform brown. Iris dark gray. Inside mouth and gill opening dark to blackish brown, also branchiostegal region. Fins all dark or dusky to blackish.

Kamchatka.

U. S. N. M., No. 74397.

In 682 fathoms.

Albatross Collection (D. 4797). Length 390 mm to end of broken

tail. Specimen in poor preservation. Type of Chalinura spinulosa.

Coryphaenoides stelgidolepis (Gilbert)

Macrurus stelgidolepis Gilbert, Proc. U. S. Nat. Mus., vol. 13,

p. 116, 1890 (type locality : off California, 267 fathoms).

—Goode and Bean, Oceanic Ichth., p. 391, 1895 (reference).

—Garman, Mem. Mus. Comp. Zool., vol. 24, p. 396, 1899

(reference).

Macrurus (Macrurus) stelgidolepis Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 389, 1906 (reference).

Macrourus stelgidolepis Jordan and Evermann, Bull. U. S. Nat.

Mus., No. 47, pt. 3, p. 2585, 1898 (copied). —Jordan,

Evermann, Clark, Rep. U. S. Comm. Fisher., pt. 2, p. 205, 1930

(reference).

Lionurus stelgidolepis Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 145, 1916 (reference).

Macrurus gracilicauda Garman, Mem. Mus. Comp. Zool., vol. 24, p.

206 (397), pl. H, fig. 1, 1899 (type locality ; lat. $7^{\circ}31'30''$ N.,

long. $79^{\circ}14'$ W., 458 fathoms; Gulf of Panama, 286 fathoms).

Macrurus (Macrurus) gracilicauda Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 388, 1906 (reference).

Macrourus gracilicauda Jordan, Evermann, Clark, Rep. U. S. Comm.

Fisher., pt. 2, p. 206, 1930 (reference).

Depth $5 \frac{1}{3}$ to $6 \frac{1}{8}$; head $4 \frac{1}{2}$ to 5, width $1 \frac{2}{3}$ to 2.
Snout to eye $3 \frac{2}{3}$ to 4 in head; eye $4 \frac{7}{8}$ to $6 \frac{1}{5}$, $1 \frac{1}{5}$ to $1 \frac{1}{2}$ in snout, 1 to $1 \frac{1}{4}$ in interorbital; orbit $3 \frac{3}{5}$ to 4 in head, $1 \frac{1}{5}$ times snout, $1 \frac{1}{5}$ to $1 \frac{1}{4}$ times interorbital; preoral profile oblique, straight, short, length $5 \frac{4}{5}$ to $6 \frac{1}{2}$ in head; maxillary reaches $\frac{2}{5}$ to $\frac{2}{3}$ in eye, length $2 \frac{4}{5}$ to $3 \frac{1}{8}$ in head; mandibular barbel 4 to $4 \frac{2}{5}$; teeth in villiform bands in jaws, in 4 or 5 irregular rows; interorbital $4 \frac{1}{8}$ to 5 in head, low, level. Gill rakers 0 or 1 + 7 to 10 low spinose tubercles on second arch, $\frac{1}{5}$ of gill filaments, which $1 \frac{1}{2}$ in orbit.

Scales 130 to 155 in lateral line; 9 above 19 to 21 below, 45 or 46 predorsal of which 25 forward opposite hind orbital edge. Scales with 13 to 18 close set irregular parallel apical series of long slender spinules, well or not extended beyond scale edge; circuli moderate, apparently not extended apically.

D. II, 10 or II, 11—110 to 124, second simple ray slender, front edge denticulate, length $1 \frac{4}{5}$ in head; interdorsal space $1 \frac{3}{4}$ to $2 \frac{1}{8}$; A. 130, fin height 5 to $5 \frac{1}{2}$; pectoral rays I, 19 to I, 23, fin $1 \frac{9}{10}$ to $2 \frac{1}{4}$ in head; ventral rays I, 8 or I, 9, fin 2 to $2 \frac{3}{5}$, first ray ending in filament.

Uniform dark brown, under surface of head, chest and belly blackish brown. Iris grayish. Inside mouth pale. Border inside gill opening and above blackish brown, below and further inside whitish. Fins dark brown.

Off California, Gulf of Panama, A compact species, with robust appearance and finely villose like squamation.

U. S. N. M., No. 44276.

In 267 fathoms.

Albatross Collection (D.2960). Type of Macrurus stelgirodolepis
310 mm, paratype 290 mm.

U. S. N. M., No. 57861. Lat. $7^{\circ}31'30''$ N., long. $79^{\circ}14'$ W.

In 458 fathoms.

Albatross Collection (D.3384). Length 222 to 313 mm. 3 examples.

U. S. N. M., No. 87579.

Albatross Collection (D.).

Length 312 mm.

Coryphaenoides sublaevis Vaillant

Coryphaenoides sublaevis Vaillant, Exped. Sci. Travailleur et

Talisman, Poiss., p. 386, 1888 (on Coryphaenoides aequalis

Vaillant). — Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 144, 1916 (reference).

Coryphaenoides aequalis (not Günther) Vaillant, Exped. Sci.

Travailleur et Talisman, Poiss., p. 225, pl. 19, figs. 2a-e,

1888 (type locality : coasts of Morocco, 2200 mm; Soudan; Banc

d'Arguin; Cape Verde Islands, 140 to 2115 meters).

Coryphaenoides suborbitalis (Gill and Townsend)

Macrurus suborbitalis Gill and Townsend, Proc. Biol. Soc. Washington,
vol. 11, p. 234, 1897 (type locality : Bering Sea south west of
Pribilof Islands, 1771 fathoms).

Nematonurus suborbitalis Jordan and Evermann, Bull. U. S. Nat. Mus.,
No. 47, pt. 3, p. 2572, 1898 (type). — Gilbert and Hubbs, Proc.
U. S. Nat. Mus., vol. 51, p. 143, 1916 (reference). — Jordan,
Evermann, Clark, Rep. U. S. Comm. Fisher., pt. 2, p. 203, 1930
(reference).

Malacocephalus suborbitalis Garman, Mem. Mus. Comp. Zool., vol. 24,
p. 395, 1899 (reference).

Depth $6 \frac{4}{5}$; head $5 \frac{1}{3}$, width $1 \frac{2}{3}$. Snout to eye $3 \frac{1}{2}$ in
head; eye $6 \frac{1}{3}$, $1 \frac{3}{4}$ in snout, $1 \frac{2}{5}$ in interorbital; orbit $4 \frac{1}{3}$
in head, 1 in snout, 1 in interorbital; maxillary reaches opposite
hind eye edge, length from front end $2 \frac{3}{5}$ in head; mandibular barbel
 $1 \frac{1}{4}$ in orbit; teeth simple, conic, outer larger and wide set above,
lower uniserial and wide set outer upper ones; interorbital $4 \frac{1}{2}$ in
head, nearly level or slightly concave medially. Gill ^{rakers} ~~rakers~~ 0 + 11
low spinescent tubercles on second arch, $\frac{1}{3}$ of gill filaments, which

1 $\frac{3}{4}$ in orbit.

Scales 150 in lateral line to small pseudocaudal; 9 above, 18 below, 55 predorsal to snout tip-of which 30 forward opposite hind orbital edge. Scales with 6 or 7 apical radiating spinuliferous keels, last spinules not or only very slightly extended beyond hind scale edge; circuli moderate, complete.

D. II, 10—85, second simple ray elongate, slender, with series of antrorse spines along its front edge, length 1 $\frac{3}{5}$ in head; interdorsal space 2; A. 100, fin height 3 $\frac{2}{5}$?; pseudocaudal very small rudiment; pectoral rays I, 18, fin 2 $\frac{3}{4}$ in head; ventral rays I, 10, fin 1 $\frac{3}{5}$.

Uniform brownish. Iris gray. Branchiostegal region dark chocolate brown. Mouth brownish inside. Inside gill opening blackish brown. Fins all dark or dusky.

Bering Sea.

U. S. N. M., No. 48773.

In 1771 fathoms.

Albatross Collection (D.3603). Length 490 mm. Type of Macrurus suborbitalis.

Coryphaenoides sulcatus Goode and Bean

Coryphaenoides sulcatus Goode and Bean, Proc. U. S. Nat. Mus., vol.

8, p. 596, 1885 (1886) (type locality : off Martinique, 472 fathoms);

Oceanic Ichth., p. 403, 1895 (type; off Martinique, 472 fathoms).

Macrurus sulcatus Günther, Rep. Voy. Challenger, vol. 22, p. 169,

1887 (compiled).

Macrurus (Trachonurus) sulcatus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 391, 1906 (reference).

Trachonurus sulcatus Goode and Bean, Oceanic Ichth., p. 410, 1895

(above examples). — Jordan and Evermann, Bull. U. S. Nat. Mus.,

No. 47, pt. 3, p. 2591, 1898 (copied).

Malacocephalus sulcatus Garman, Mem. Mus. Comp. Zool., vol. 24, p.

395, 1899 (reference).

Depth 9 to $9 \frac{2}{5}$; head $6 \frac{3}{4}$ to $7 \frac{1}{3}$, width 2 to $2 \frac{2}{5}$. Snout 4 to $4 \frac{2}{5}$ in head, $1 \frac{2}{5}$ to $1 \frac{1}{2}$ in eye; eye $2 \frac{1}{2}$ to $3 \frac{2}{5}$ in head, greater than snout or interorbital; maxillary reaches $\frac{1}{3}$ to $\frac{2}{5}$ in eye, length $2 \frac{2}{3}$ to $2 \frac{7}{8}$ in head; mandibular barbel $2 \frac{2}{5}$ to $3 \frac{1}{4}$ in eye; teeth minutely villiform, in bands in jaws of 6 to 8 irregular rows; interorbital $3 \frac{2}{5}$ to $3 \frac{1}{2}$ in head, $1 \frac{1}{10}$ to $1 \frac{3}{5}$ in eye, low, slightly convex. Gill rakers 0 + 9 low spinescent tubercles on second arch, $\frac{1}{3}$ of gill filaments, which $2 \frac{3}{4}$ in eye.

Scales 175 in lateral line; 7 above, 21 or 22 below, 13 predorsal forward to occiput, which about first fifth between hind orbital edge and first dorsal origin. Scales with cluster of 5 to 10 irregular, mostly erect, slender, long, divergent spinules, most extending well beyond scale limits; circuli moderate, not extended apically.

D. II, 8 or II, 9—157?, second simple ray slender, pungent, entire, filamentous terminally, 2 to $2 \frac{1}{5}$ in head; interdorsal space 4 to $4 \frac{1}{2}$; A. 145?, fin head $3 \frac{3}{5}$?; pectoral rays I, 12, fin $2 \frac{1}{2}$ to 3 in head; ventral fin ray I, 6 (damaged).

Brown, more or less uniform. Mandible, under surface of head, inclusive of opercles, chest and belly dark neutral to blackish brown. Iris dark gray. Inside iris gray. Inside gill opercle blackish brown. Fins all brown.

West Indies. Rough velvety to touch, covered with fine erect spinules and scales well imbedded so as to appear scarcely distinct. The tail is very long, slender and tapering nearly to filament.

U. S. N. M., No. 34907. Lat. $15^{\circ}24'40''$ N., long. $63^{\circ}31'40''$ W. In
683 fathoms. January 27, 1884.

Albatross Collection (). Length 683 mm.

U. S. N. M., No. 37335. Lat. $28^{\circ}38'30''$ N., long. $87^{\circ}02'$ W. In 420 fathoms.

Albatross Collection (D.2394).

Length 90 to 234 mm. 4 examples. Types.

Coryphaenoides trichiurus (Garman)

Macrurus trichiurus Garman, Mem. Mus. Comp. Zool., vol. 24, p. 215

(397), 1899 (type locality : lat. 6°30'N., long. 81°44'W., off

Mariato Point, Panama, 555 fathoms).

Macrurus (Macrurus) trichiurus Brauer, Deutsch. Tiefsee Exped.

Valdivia, vol. 15, p. 388, 1906 (reference).

Macrourus trichiurus Jordan, Evermann, Clark, Rep. U. S. Comm.

Fisher., pt. 2, p. 206, 1930 (reference).

Lionurus trichiurus Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 146, 1916 (reference).

Coryphaenoides tydemani (Weber)

Macrurus tydemani Weber, Siboga Exped., vol. 57, p. 158, pl. 1, fig.

5, 1913 (type locality : lat. 7°28'2"S., long. 115°24'6"E., Bali

Sea, 1018 meters; Flores Sea; Ceram Sea; Arafura Sea; 538 to 1310

meters).

Coryphaenoides tydemani Gilbert and Hubbs, Bull. U. S. Nat. Mus.,

No. 100, vol. 1, p. 414, 1920 (Buton Strait near Celebes, 559

fathoms). — Weber and Beaufort, Fishes Indo Austral. Archip.,

vol. 5, p. 31, fig. 6, 1929 (type; Weber's materials).

Coryphaenoides violaceus (Zugmayer)

Macrurus violaceus Zugmayer, Bull. Inst. Ocean. Monaco, No. 193,

p. 9, Jan. 20, 1911 (type locality : lat. 36°42'N., long. 8°40'W.,

750 meters); Rés. Camp. Sci. Monaco, vol. 35, p. 123, pl. 6, figs.

2a-b, 1911 (types).

Coryphaenoides whitsoni (Regan)

Chalinura whitsoni Regan, Rep. Voy. Scotia, vol. 4, Zool., p. 1410,

pl. 2, fig. 2, 1915 (type locality: lat. 48°6'S., long. 10°5'W.,

1742 fathoms; lat. 71°22'S., long. 16°34'W., 1410 fathoms).

Coryphaenoides whitsoni Gilbert and Hubbs, Proc. U. S. Nat. Mus.,

vol. 51, p. 143, 1916 (reference).

Coryphaenoides wood-masoni (Alcock)

Macrurus wood-masoni Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 6, p.

301, Oct. 1890 (type locality : lat. 11°12'47"N., long. 74°25'30",

off Elicapeni Bank, Laccadive Sea, 1000 fathoms); ser. 6, vol. 8, p.

121, 1891 (Station 109, 738 fathoms); ser. 6, vol. 10, p. 353, Nov.

1892 (Station 128, 902 fathoms; Station 135, 559 fathoms). Journ

Asiatic Soc. Bengal, vol 43, pt. 2, p. 126, 1894 ();

—Illustrat. Zool. Investigator, pt. 2, pl. 13, fig. 1, 1894. —

Goode and Bean, Oceanic Ichth., p. 390, 1895 (reference). Garman

Mem. Mus. Comp. Zool., vol. 24, p. 396, 1899 (reference).

Macrurus (Macrurus) wood-masoni Alcock, Cat. Deep Sea Fishes Indian Mus.,

p. 114, 1899 (Arabian Sea, 360 to 1000 fathoms). —Brauer, Deutsch.

Tiefsee Exped. Valdivia, vol. 15, p. 267 (389), 1906 (off east Africa)

693 meters; Gulf of Aden, 1840 meters).

Coryphaenoides wood-masoni Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol.

51, p. 144, 1916 (reference); Bull. U. S. Nat. Mus., No. 100, vol. 1,

p. 409, 1920 (reference).

Coryphaenoides zaniaphorus (Vaillant)

Macrurus zaniaphorus Vaillant, Exped Sci. Travailleur et Talisman,

Poiss., p. 245, pl. 22, figs. 4-a (scale), 188 (type locality :

coasts of Morocco; Soudan; Banc d'Arguin; 830 to 1350 fathoms).

—Goode and Bean, Oceanic Ichth., p. 397, 1895 (name). —Garman,

Mem. Mus. Comp. Zool., vol. 24, p. 396, 1899 (reference). —

Murray and Hjort, Depths of the Ocean, p. 397, 1912 (lat. 49°38'N.,

long. 11°35'W., 504 fathoms; lat. 28°8'N., long. 13°35'W., 747

fathoms).

Macrurus (Macrurus) zaniaphorus Brauer, Deutsch. Tiefsee Exped. Valdavia,

vol. 15, p. 389, 1906 (reference).

Front

Genus Caelorinchus Giorna

Caelorinchus Giorna, Mém. Acad. Sci. Torino, vol. 16, p. 179, 1805-8.

(Atypic. "Coelorhynche la Ville". Type Lepidoleprus caelorhynchus

Risso, tautotypic.)

Coelorhynchus Agassiz, Nomencl. Zool. Genera Animal., Pisces, p. 10,

1846. (Type Lepidoleprus caelorhynchus Risso.)

Krohnus Cocco, Intorn. Pesc. Messina (Lettere A. Cocco A. Krohn), p.

15, 144, 1844. (Type Krohnus filamentosus Cocco, monotypic. (Larval.)

Oxymacrurus Bleeker, Verh. Kon. Akad. Wet. Amsterdam, vol. 8, p. 370,

1874 (type Macrurus japonicus Schlegel, designated.)

Paramacrurus Bleeker, Verh. Kon. Akad. Wet. Amsterdam, vol. 8, p. 370,

1874 (Type Lepidolepris australis Richardson, designated.)

Abyssicola Goode and Bean, Oceanic Ichth., p. 417, 1895. (Type Macrurus

Günther, monotypic.)

Quincunica Gilbert and Hubbs, Bull. U. S. Nat. Mus., No. 100, vol. 1,
p. 432, 1920 (Type Coelorhynchus argentatus Smith and Radcliffe,
orthotypic.)

Oxygadus Gilbert and Hubbs, Bull. U. S. Nat. Museum, No. 100, vol. 1,
p. 515, 1920. (Type Macrurus parallelus Günther, orthotypic.)

Body with trunk short, usually less than head, compressed, tail long and tapering. Head compressed, large. Snout usually projecting, long, short or obtuse. Mouth wide, lateral, inferior, sometimes sub-terminal. Mandibular barbel present, often small. Teeth in villiform bands, varying above to but 2 or 3 irregular series and below to uniserial or irregularly biserial. Interorbital wide, flat. Suborbital ridge continuous to preopercle. Median rostral, occipital and postorbital ridges developed or prominent. Gill openings wide. Gill membranes broadly united in front, joined to isthmus, leaving very narrow fold. Gill rakers few, low spinescent tubercles on second gill arch, still fewer on first gill arch. Branchiostegals 6. Scales with apical spinules, sometimes in quincunx or again in parallel, divergent or radiating ridges. Scales along dorsal and anal bases without enlarged spines. Lateral line slightly arched along side of trunk, axial along side of tail. Second simple dorsal ray pungent, often ends in filament, front edge entire or smooth. Interdorsal space usually long. Dorsal, ventral and pectoral origins often nearly in same vertical plane, close behind head. Pectoral with 13 to 19 branched rays. Ventral with 5 or 6 branched rays, outer simple ray filamentous or somewhat prolonged, inserted before pectoral. Vent close to or remote from anal. One or 2 large fossal

before anus, with well pigmented glandular body.

A large genus, of which half of the known species from the East Indian region. Though world wide in warm seas in depths of from 70 to 2200 meters they are usually found in depths of 800 meters or less. Likely when extensive deep sea collections are made in hitherto little known waters many more species will be found.

Caelorinchus acanthiger Barnard

Coelorhynchus acanthiger Barnard, Ann. Mag. Nat. Hist., ser. 9, vol. 15,

p. 502, 1925 (type locality : Off Cape Point in 460 fathoms; Ann. South

Afric. Mus., vol. 21, pt. 1, p. 345, June 1925, copied).

Caelorinchus acantholepis Gilbert and Hubbs

Coelorhynchus acantholepis Gilbert and Hubbs, Bull. U. S. Nat. Mus.,

No. 100, vol. 1, p. (429) 488, fig. 17 (view above), fig. 18, 1920

(type locality : Vicinity of Sibuko Bay, Borneo, 347 to 415 fathoms).

—Weber and Beaufort, Fishes Indo Austral. Archip., vol. 5, p. 48,

1929 (Weber's materials).

Coelorhynchus platorhynchus form alpha Smith and Radcliffe, Proc. U.

S. Nat. Mus., vol. 43, p. 134, fig. 9, 1912 (Albatross Station 5586,

347 fathoms; Albatross Station 5587, 415 fathoms [not Albatross Station 5111]).

Coelorhynchus japonicus (not Schlegel) Weber and Beaufort, Siboga Exped.,

vol. 57, fische, p. 163, 1913 (Flores Sea, 521-694 meters; Macassar

Strait, 724 meters; Arafura Sea, 304 meters; Kei Islands, 560 meters;

Bali Strait, 538 meters).

Depth $6 \frac{1}{2}$; head 4, width $2 \frac{1}{8}$. Snout to eye $2 \frac{1}{3}$ in head; eye 6, $2 \frac{4}{5}$ in snout, $1 \frac{7}{8}$ in interorbital; orbit 5, 2 in snout, $1 \frac{1}{2}$ in interorbital; maxillary reaches about opposite hind eye edge, length from front end $3 \frac{1}{2}$ in head; mandibular barbel $2 \frac{1}{3}$ in orbit; teeth in villiform bands, uniform, 5 or 6 irregular transverse series; interorbital $3 \frac{4}{5}$ in head, low, transversely depressed anteriorly. Gill rakers $0 + 5$, low spinescent tubercles on second arch, $\frac{1}{4}$ of gill filaments, which $1 \frac{7}{8}$ in eye.

Scales about 74 in lateral line to pseudocaudal; 5 above, 10? below, 10 predorsal forward to occiput and 23 more still forward to snout tip. Scales with 4 to 7 apical parallel keels with spinules, last of which extending beyond scale edge; circuli rather fine, more or less complete.

D. II, 9—64, second simple ray entire, $1 \frac{7}{8}$ in head; interdorsal space 4; A. 66, fin height $5 \frac{2}{3}$; pseudocaudal distinct (broken), rather large; pectoral rays 17 or 18, fin $1 \frac{9}{10}$ in head; ventral rays I, 6, fin $2 \frac{3}{4}$.

Dark brown, more or less uniform. Iris pale or with grayish. Inside mouth brownish. Inside gill opening blackish. Fins more or less darker than body.

U. S. N. M., No. 78222. Sipadan Island (W.) $S. 12^{\circ}E.$, 3.8 miles (Lat. $4^{\circ}10'35''N.$, long. $118^{\circ}37'12''E.$), Sibuko Bay, Borneo, in 415 fathoms, Albatross Collection (D.5587). Length 332 mm to end of broken pseudocaudal. Type.

Caelorinchus acutirostris Smith and Radcliffe

Caelorhynchus acutirostris Smith and Radcliffe, Proc. U. S. Nat. Mus.,
vol. 43, p. 134, pl. 30, fig. 2, text fig. 10, 1912 (type locality :
Between Cebu and Bohol, in 159 fathoms). —Gilbert and Hubbs, Proc.
U. S. Nat. Mus., vol. 51, p. 145, 1916 (reference); Bull. U. S. Nat.
Mus., No. 100, vol. 1, p. 1512, 1920 (between Cebu and Bohol; vicin-
ity northern Mindanao; 150 to 175 fathoms).

Depth $6 \frac{4}{5}$; head $3 \frac{1}{5}$, width $2 \frac{2}{5}$. Snout to eye $1 \frac{9}{10}$ in
head, ending in sharp slender point; eye $6 \frac{1}{8}$, $3 \frac{1}{8}$ in snout, $1 \frac{1}{4}$
in interorbital; orbit $4 \frac{1}{2}$ in head, $2 \frac{1}{5}$ in snout, equals interorbital;
maxillary reaches $\frac{3}{5}$ in eye, length from front end $4 \frac{4}{5}$ in head; mandib-
ular barbel 3 in eye; teeth finely villiform bands in 5 or 6 transverse
irregular rows; interorbital $4 \frac{3}{4}$ in head, low and level forward. Gill
rakers 0 + 5 short low spiniferous tubercles on second arch, $\frac{1}{4}$ of gill
filaments, which $\frac{1}{2}$ of eye.

Scales 84 in lateral line (to end of broken tail); 7 above, 13 below, 12 predorsal forward to occiput, which slightly before upper hind vertical end of preopercle. Scales with 5 to 7 radiating spinules project beyond scale edge; circuli moderate, complete.

D. II, 8—75, second simple ray entire, slender, $2\frac{3}{4}$ in head; interdorsal space 7; A. 70, fin height $5\frac{2}{3}$ in head; pectoral rays I, 14, fin $3\frac{1}{4}$ in head; ventral rays I, 6, fin $3\frac{2}{5}$ in head.

Back brown, sides and below paler to whitish with slightly silvery wash. Snout pale. Under surface of head whitish. Belly grayish. Iris gray. Inside mouth dusky. Inside gill openings blackish. Fins mostly pale brownish, ventrals dusted dark or dusky.

U. S. N. M., No. 72947. Luis Point Light, N.16°#., 5.6 miles (lat. 10°8'50"N., 123°52'30"E.), between Cebu and Bohol, in 159 fathoms. Albatross Collection (D.5418). Length 205 mm to end of broken tail. Type.

Caelorinchus affinis (Vaillant)

Macrurus affinis Vaillant, Expéd. Sci. Travellieur et Talisman, Poiss.,

p. 51, 1888 (type locality : South of Azores, in 1442 meters).

Macrurus japonicus (not Schlegel) Vaillant, Expéd. Sci. Travellieur

et Talisman, Poiss., p. 254, pl. 21, figs. 1a-f, 1888 (Soudan coasts,

Banc. d'Arguin, Cape Verde Islands, Azores, 460 to 220 meters).

Macrurus talismani Collett,

—Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51, p. 145, 1916

(reference).

Macrurus (Coelorhynchus) talismani, Brauer, Deutsche Tiefsee Exped.

Valdivia, vol. 15, p. 388, 1906 (reference). — Murray and Hjort,

Depths of the Ocean, p. 397, 1912 (Faroe Shetland Channel, off

southern England, Gibraltar, Canaries, 504 to 883 fathoms).

Coelorhynchus vaillanti Roule, Bull. Inst. Océanog. Monaco, No. 320,

p. 20, May 20, 1916 (type locality: Azores, 1187 meters); Rés.

Camp. Sci. Monaco, vol. 52, p. 81, pl. 3, figs. 3a-c, 1919 (6 miles

south of Sao Miguel, 1187 meters; north of Sao Jorge, 3 1/2 miles
1095 meters).

Caelorinchus anatirostris Jordan and Starks

Coelorhynchus anatirostris (Jordan and Gilbert) Jordan and Starks, Bull.

U. S. Fish Comm., vol. 22, p. 619, fig. , 1902 (Aug. 1904) (type

locality : Misaki, Sagami). — Jordan, Tanaka, Snyder, Journ. College

Sci. Tokyo, vol. 33, pt. 1, p. 418, fig. 388 (copied), 1913. —

Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51, p. 145, 1917 (ref-

erence); Bull. U. S. Nat. Mus., No. 100, vol. 1, p. 431, 1920 (diagnosis in key).

Coelorhynchus antirostris Franz, Abhandl. Kon. Bayer, Akad. Wiss., vol. 4,

Suppl. Band, vol. 1, p. 27, 1910 (Aburatsubo).

Depth $7 \frac{2}{3}$; head $4 \frac{1}{5}$, width $2 \frac{1}{8}$. Snout to eye $2 \frac{1}{4}$ in head; eye $5 \frac{1}{4}$, $2 \frac{1}{4}$ in snout, $1 \frac{1}{4}$ in interorbital; orbit 4 in head, $1 \frac{3}{5}$ in snout, very slightly more than interorbital; maxillary reaches $\frac{3}{4}$ in eye, length from front end 4 in head; mandibular barbel $2 \frac{1}{4}$ in eye; teeth uniform, villiform, in bands in jaws of 8 or 9 irregular rows transversely; interorbital $4 \frac{1}{4}$ in head, low, depressed forward until nearly level. Gill rakers 0+7 low short spinescent tubercles on second arch, $\frac{1}{4}$ of 1111 filaments, which $\frac{1}{2}$ of eye.

Scales about 110 in lateral line to pseudocaudal; 6 above, 12 below, 9 predorsal forward to occiput and 25? more forward to snout tip. Scales with 6 to 9 radiating apical spinuliferous ridges, median usually

largest and extend beyond scale edge; circuli moderate, complete.

D. II, 9—104, second simple ray slender, entire, length $1 \frac{7}{8}$ in head; interdorsal space $3 \frac{1}{2}$; A. 110, fin height $4 \frac{1}{3}$; pectoral rays I, 16, fin $2 \frac{1}{4}$ in head; ventral rays I, 6, fin $3 \frac{1}{5}$.

Brown above, paler to whitish on under surfaces of head and abdomen. Iris pale brassy to whitish. Inside mouth brown. Inside gill opening blackish brown. Fins brownish, with more or less dusky to blackish brown.

Japan. Gilbert says "Type, 40 cm. long, from Misaki, No. 8550, L. S. Jr. U." At the end of his description he says "Only one specimen seen; it was taken on long lines at Misaki by Kuma Aoki and presented to us by Professor Mitsukuri."

U. S. N. M., No. 51471. Misaki, Sagami, Japan.

Length 387 mm. Type.

Caelorinchus aratrum Gilbert

Coelorhynchus aratrum Gilbert, Bull. U. S. Fish Comm., vol. 23, pt. 2,

p. 674, fig. 264, 1903 (1905) (type locality : off south coast of

Oahu, 311 to 337 fathoms; also off Oahu and Pailolo Channel, 289 to

337 fathoms). —Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51,

p. 145, 1916 (reference); Bull. U. S. Nat. Mus., No. 100, vol. 1,

pt. 7, p. 432, 1920 (diagnosis in key). —Fowler, Mem. Bishop Mus.,

vol. 10, p. 86, 1928 (type; Hawaii).

Macrurus (Coelorhynchus) aratrum Brauer, Deutsch. Tiefsee Exped. Valdivia,

vol. 15, p. 388, 1906 (reference).

Coelorhynchus parallelus (not Günther) Gilbert and Cramer, Proc. U. S.

Nat. Mus., vol. 19, p. 421, 1897 (Hawaiian Islands, 313 fathoms).

Depth $6 \frac{1}{3}$ to 7; head $3 \frac{1}{5}$ to $3 \frac{1}{3}$, width $1 \frac{7}{8}$ to $2 \frac{1}{5}$.
Snout to eye $2 \frac{1}{10}$ to $2 \frac{1}{6}$ in head; eye $4 \frac{1}{2}$ to $4 \frac{3}{5}$, $2 \frac{1}{8}$ in
snout, 1 to $1 \frac{1}{8}$ in interorbital; orbit $3 \frac{2}{3}$ to 4 in head, $1 \frac{3}{5}$ to
 $1 \frac{7}{8}$ in snout, $1 \frac{1}{8}$ to $1 \frac{1}{6}$ times interorbital; maxillary reaches
 $\frac{3}{5}$ to $\frac{2}{3}$ in eye, length from front end $4 \frac{1}{5}$ to $4 \frac{4}{5}$ in head; teeth
in villiform bands in jaws, of 7 or 8 irregular series transversely;
interorbital 4 to $4 \frac{4}{5}$, low to broadly convex forward. Gill rakers 0

+ 6 low spinescent tubercles on second arch, $1/4$ of gill filaments, which $1/2$ of eye.

Scales 75 in lateral line to pseudocaudal; 6 above, 14 below, 8 predorsal forward to occiput which at first $2/5$ between hind eye edge and first dorsal origin. Scales with 3 to 5 nearly parallel rows of strong spines, last of which extend behind hind scale edge; circuli fine, not extended apically.

D. II, 8—61, second simple ray slender, entire, first branched ray $2 \frac{1}{3}$ in head; interdorsal space 7 to $8 \frac{1}{2}$; A. 68, fin height $4 \frac{7}{8}$; pectoral rays I, 17, fin $2 \frac{1}{3}$ to $2 \frac{3}{4}$ in head; ventral rays I, 6, fin $2 \frac{3}{4}$ to 3.

Back brown, little paler below, under surface of head much lighter or paler. Branchiostegal region and opercles tinged with gray or dark brown. Iris pale. Inside mouth gray. Inside gill opening blackish. Fins all brownish, first dorsal blackish.

U. S. N. M., No. 47701. Lat. $21^{\circ}15'N.$, long. $157^{\circ}30'$.

December 6, 1891.

Albatross Collection (D.3473).

Length 122 mm.

U. S. N. M., No. 51656.

Albatross Collection.

Length 320 mm. Type.

Coelorhynchus argentatus Smith and Radcliffe

Coelorhynchus argentatus Smith and Radcliffe, Proc. U. S. Nat. Mus.,

vol. 43, p. 137, pl. 31, fig. 1, 1912 (type locality : Jolo,

Philippines). — Gilbert and Hubbs, Proc. U. S. Nat. Mus., vol. 51,

p. 145, 1916 (reference); Bull. U. S. Nat. Mus., No. 100, vol. 1,

p. 433, 1920 (off southern Luzon; north of Mindanao; Gulf of Davao;

Jolo; between Jolo and Tawi Tawi; 100 to 318 fathoms). — Barnard,

Ann. South Afric. Mus., vol. 21, pt. 1, p. 339, June 1925 (east of

Algoa Bay, 47 fathoms). — Weber and Beaufort, Fishes Indo Austral.

Archip., vol. 5, p. 40, fig. 9 (head), 1929 (near Kei Islands).

Coelorhynchus acus Weber, Siboga Exped., vol. 57, Fische, p. 160, pl.

1, figs, 4-4a, 1913 (type locality : lat. 5°40'S., long. 132°26'E.,

310 meters, Kei Islands; lat. 5°26'6"S., long. 132°32'5, 397 meters).

Depth $6 \frac{1}{2}$; head 4, width $2 \frac{1}{4}$. Snout to eye $2 \frac{3}{5}$ in head; eye $5 \frac{2}{5}$, $2 \frac{1}{5}$ in snout, $1 \frac{1}{2}$ in interorbital; orbit $4 \frac{3}{5}$ in head, $1 \frac{3}{5}$ in snout, $1 \frac{1}{10}$ in interorbital; maxillary reaches opposite hind edge of orbit, length from front end $2 \frac{3}{4}$ in head; mandibular barbel $1 \frac{3}{4}$ in eye; teeth in villiform bands in jaws, in 5 or 6 irregular transverse series; interorbital 4 in head, low, broadly convex. Gill rakers $0 + 8$ on second arch, low spinescent tubercles $\frac{1}{3}$ of gill filaments, which $1 \frac{4}{5}$ in eye.

Scales 128? (pockets) in lateral axial series; 7 above, 13 below, 12 forward to occiput. Scales with 12 to 14 irregular series of minute denticles; circuli rather coarse, complete.

D. II, 9—100, second simple ray entire, slender, $2 \frac{2}{3}$ in head; interdorsal space $3 \frac{1}{5}$; A. 100, fin height $4 \frac{7}{8}$; pseudocaudal minute; pectoral rays I, 13, fin $2 \frac{2}{5}$ in head; ventral rays I, 6, fin $3 \frac{4}{5}$.

Brownish, most of head and body laterally with silvery white tints. Iris brassy. Fins all more or less brownish, first dorsal dusky. Inside of mouth and gill opening pale. Chin, chest and breast tinted with dark neutral gray.

South Africa, Philippines, Kei Islands. The scales are variable as some have converging or radiating rows of apical spinules, again they appear in parallel rows or may even be without any regularity in arrangement. Characteristic is the cavernous or transparent to swollen appearance of the head, the inconspicuous ridges above, the finely roughened or only rough velvety feel of the scales and the silvery coloration, with a dark gray or slate area on the belly.

long. $120^{\circ}35'30''$ E.), vicinity of Jolo, in 318 fathoms. March 5, 1908.

Albatross Collection (D.5172). Length 365 mm.